

CS: 16091

ID: 016

16071-016
16092-016
24071-005

X

MICHIGAN
STATE HIGHWAY DEPARTMENT

PLANS OF PROPOSED
MICHIGAN PROJECT I-75-5(14)305
STATE PROJECTS I16091CC16, I16092CC16, I24071CC5
INDIAN RIVER-MACKINAW CITY ROAD
CHEBOYGAN & EMMET COUNTIES
TUSCARORA, BURT, MUNRO, HEBRON,
WAWATAM TOWNSHIPS

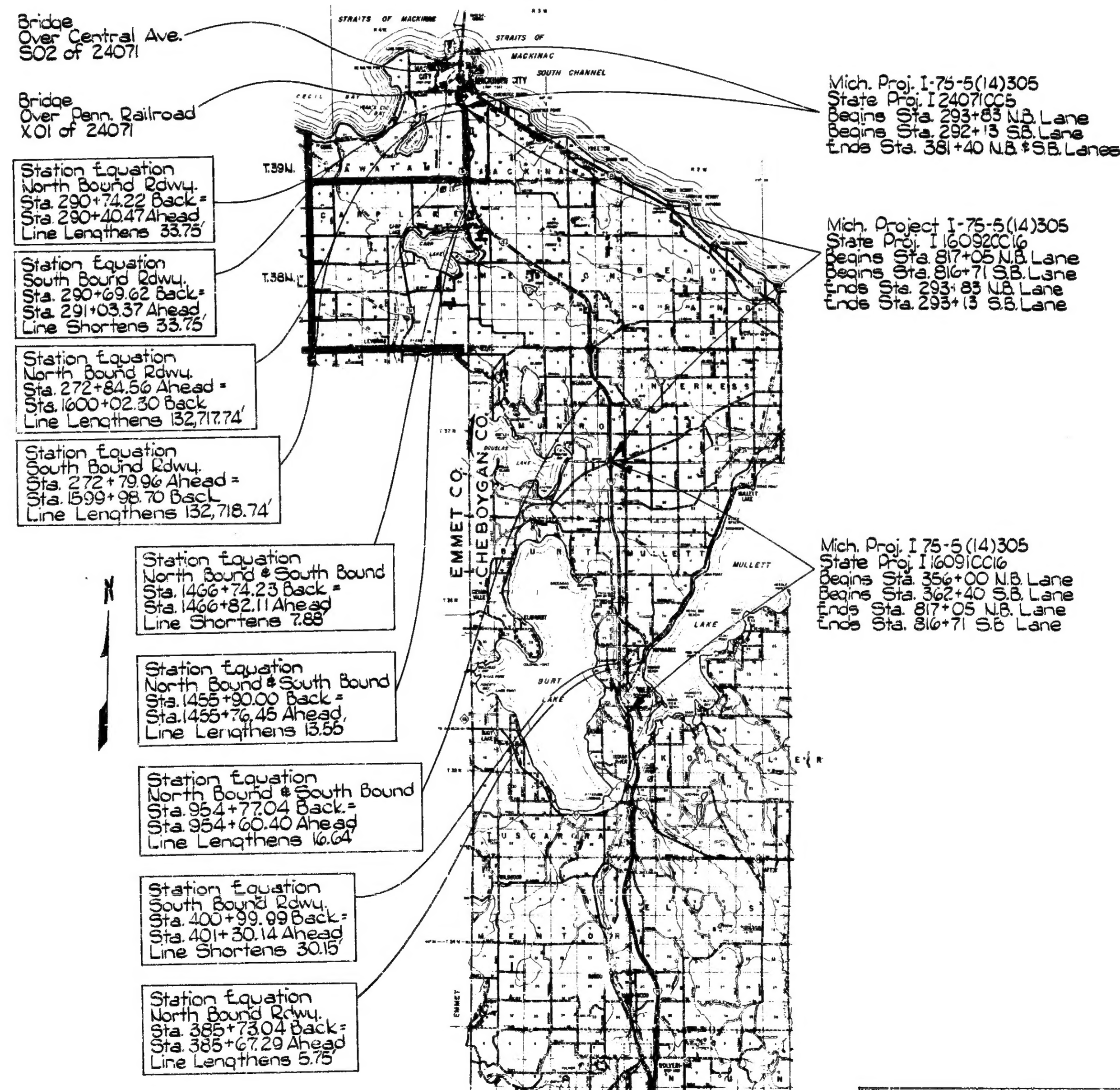
ROUTE	STATE PROJECT NO.	FEDERAL NO.	SHEET NO.	TOTAL SHEETS
I-75	I16091CC16, I16092CC16, I24071CC5	275-5(14)-305	1	37

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN STATE HIGHWAY DEPARTMENT CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

LEGEND
A.D.T.
D.H.V.
COMM.
DESIGN SPEED

ROAD PLANS	SHEET NO'S.
TITLE	1
TYPICAL CROSS SECTIONS	2-3
NOTE SHEET	4
PLANS & PROFILES	5-34
QUANTITY SHEETS	35-37

TITLE SHEET LEGEND	EXISTING CONDITION
PROPOSED PROJECT	GRAVEL BITUMINOUS PAVED UNIMPROVED OR CITY STREET COUNTY LINE CITY OR VILLAGE LIMITS TOWNSHIP LINE SECTION LINE RAILROADS



Mich. Proj. I-75-5(14)305
State Proj. I24071CC5
Begins Sta. 293+83 N.B. Lane
Begins Sta. 292+13 S.B. Lane
Ends Sta. 381+40 N.B. & S.B. Lanes

Mich. Project I-75-5(14)305
State Proj. I16092CC16
Begins Sta. 817+05 N.B. Lane
Begins Sta. 816+71 S.B. Lane
Ends Sta. 293+83 N.B. Lane
Ends Sta. 293+13 S.B. Lane

Mich. Proj. I-75-5(14)305
State Proj. I16091CC16
Begins Sta. 356+00 N.B. Lane
Begins Sta. 362+40 S.B. Lane
Ends Sta. 817+05 N.B. Lane
Ends Sta. 816+71 S.B. Lane

AS CONSTRUCTED
ACCORDING TO MARKED PLANS
PREPARED BY PROJECT ENGINEER

ITEM NO. 776

I6091C 8.733 miles
I6092C 15.214 miles
24071C 1.672 miles

CONTRACT FOR Bit. Agg. Shldr. Surfacing, 3' Inside & 9' Outside

CHECKED	1-19-65
RECOMMENDED FOR APPROVAL	1-19-65
RECOMMENDED FOR APPROVAL	1-19-65

APPROVED	1-27-65
APPROVED	1/14/65

APPROVED BY	1-27-65
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PLANS PREPARED BY	DEPARTMENT OF COMMERCE
MICHIGAN STATE HIGHWAY DEPARTMENT	BUREAU OF PUBLIC ROADS
SQUAD F.C. MARSH	DIVISION ENGINEER

I6091CC16, I6092CC16, 24071CC5

STATE PROJECT NO.	FEDERAL PROJECT NO.	SHEET NO.
I6091C, I6092C, 24071C	275-5(14)-305	1

I16091CC16, I16092CC16, I24071CC5

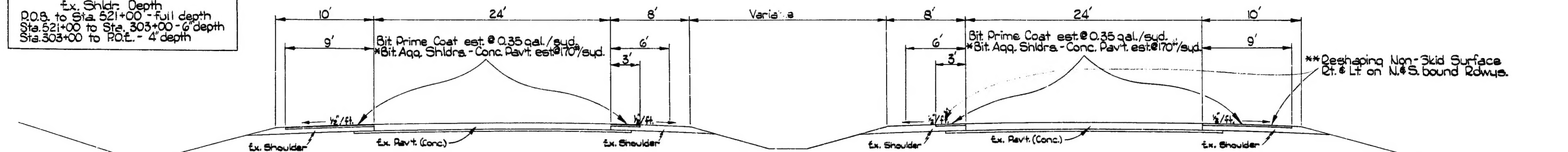
TYPICAL CROSS-SECTIONS

S.F. R. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	16091C	1975-1976	2	37
ROUTE	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1-75	MICH.	16091C	1975-1976	2	37

- * Use Bit. Aq. Shldr. - Conc. Pavt. when placed Adjacent to Concrete Pavement.
- * Use Bit. Aq. Shldr. - Bit. Pavt. when placed Adjacent to Bituminous Pavement.
- Bit. Aq. Shldr. - Bit. Pavt. shall be given a single non-skid surf. treatment of Bit. Mat'l. At 3 Appl. and Cover Mat'l., 3/4" (Limestone) Applied.

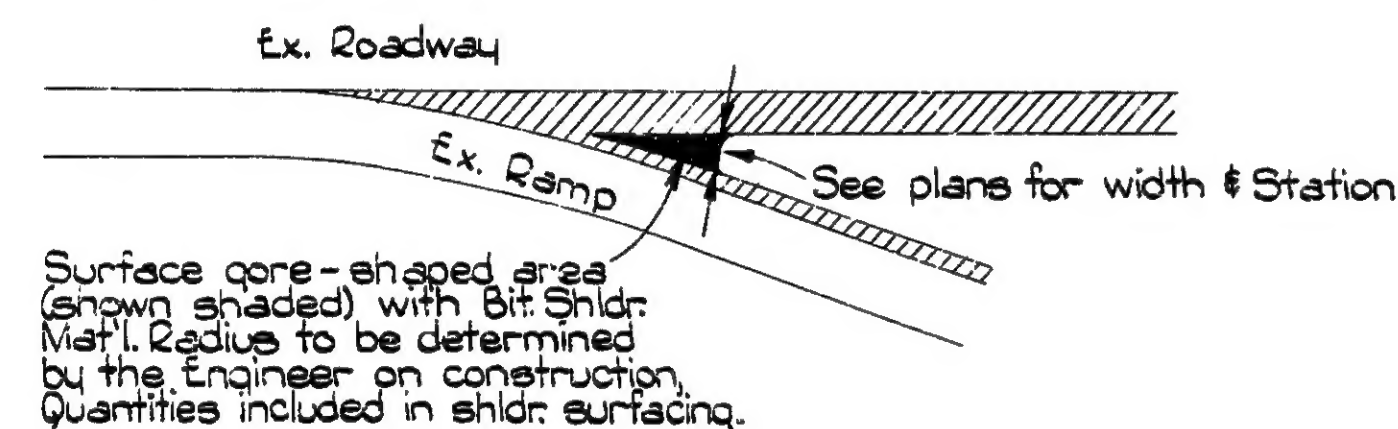
** Reshaping Non-Skid Surface shall be narrowed in guard rail sections, and work shall be done as directed by the Engineer to insure protection of edges of exist. bituminous pavt. from damage by construction equipment.

Ex. Shldr. Depth
R.O.S. to Sta. 521+00 - Full depth
Sta. 521+00 to Sta. 303+00 - 6' depth
Sta. 303+00 to R.O.S. - 4' depth

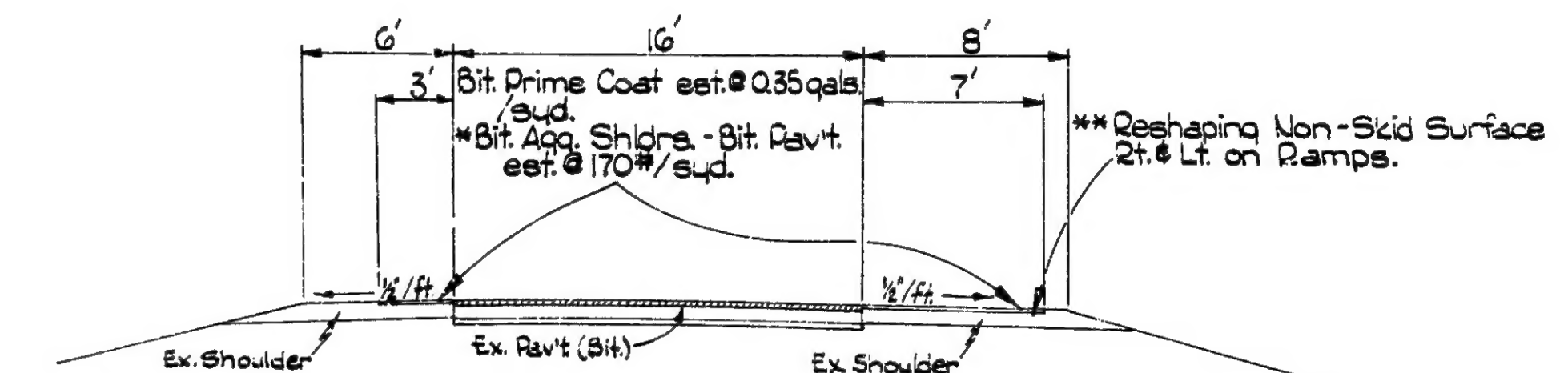


SECTION TO APPLY

N.B. Rdwy: { Sta. 356+00 to Sta. 1600+02.30
Sta. 1600+02.30 to Sta. 272+84.56 (Sta. Equation)
Sta. 272+84.56 to Sta. 293+82.89
S.B. Rdwy: { Sta. 362+40 to Sta. 1599+98.70
Sta. 1599+98.70 to Sta. 272+79.96 (Sta. Equation)
Sta. 272+79.96 to Sta. 293+12.89

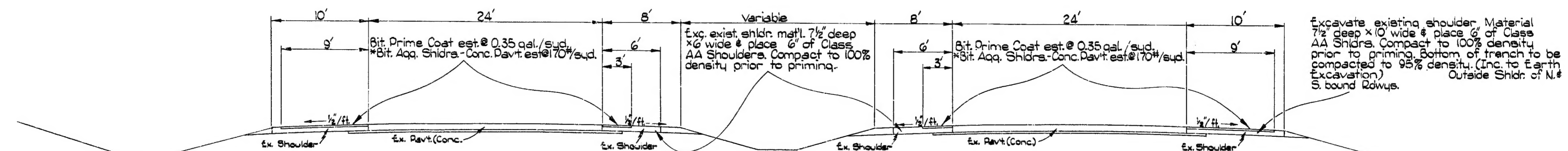


GORE DETAIL



SECTION TO APPLY ON RAMP

Riggsville Hwy. Interchange
Levering Road Interchange



SECTION TO APPLY

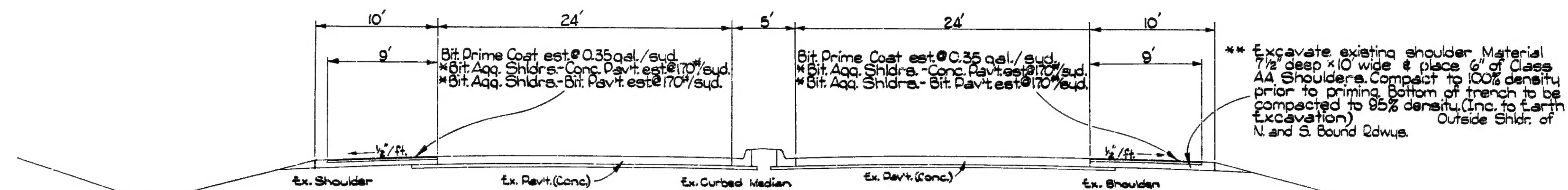
N.B. Rdwy: Sta. 293+82.89 to Sta. 314+85
S.B. Rdwy: Sta. 293+12.89 to Sta. 314+85

Excavate existing shoulder. Material 7 1/2' deep x 10' wide & place 6' of Class AA Shldr. Compact to 100% density prior to priming. Bottom of trench to be compacted to 95% density. (Inc. to Earth Excavation) Outside Shldr. of N.B. S. bound Rdwys.

TYPICAL CROSS-SECTIONS

B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MI	1-75-44400			
ROUTE	STATE PROJ. NO.	COUNTY	TOWNSHIP	SHEET NO.	TOTAL SHEETS
1-7	16091C	Washtenaw	Washtenaw	3	37
B.P.R. DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MI	1-75-44400			
ROUTE	STATE PROJ. NO.	COUNTY	TOWNSHIP	SHEET NO.	TOTAL SHEETS
1-7	16091C	Washtenaw	Washtenaw	3	37

* Use Bit. Aq. Shldr. - Conc. Pavt. when placed Adjacent to Concrete Pavement.
 * Use Bit. Aq. Shldr. - Bit. Pavt. when placed Adjacent to Bituminous Pavement.
 Bit. Aq. Shldr. - Bit. Pavt. shall be given a single non-skid surf. treatment of Bit. Mat'l. At-S, Applied and Cover Mat'l. 31A (Limestone), Applied.



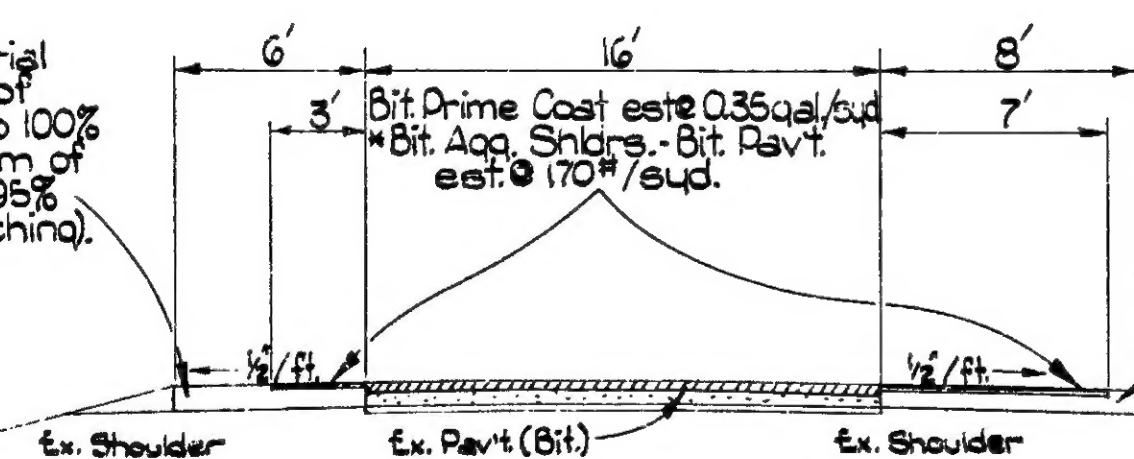
** Excavate existing shoulder Material 7 1/2' deep x 10' wide & place 6' of Class AA Shoulders. Compact to 100% density prior to priming. Bottom of trench to be compacted to 95% density. (Inc. to Earth Excavation) Outside Shldr. of N. and S. Bound Rdwys.

SECTION TO APPLY

N.B. Rdwy. { Sta. 314+85 to Sta. 358+03
 Sta. 358+03 to Sta. 360+62.7 (Bridge Omit)
 Sta. 360+62.7 to Sta. 363+52.9
 Sta. 363+52.9 to Sta. 364+84.39 (Bridge Omit)
 Sta. 364+84.39 to Sta. 371+65
 Sta. 371+65 to Sta. 372+85 (Street approach omit)
 Sta. 372+85 to Sta. 381+45
 S.B. Rdwy. { Sta. 314+85 to Sta. 358+00
 Sta. 358+00 to Sta. 360+48.6 (Bridge Omit)
 Sta. 360+48.6 to Sta. 363+40.9
 Sta. 363+40.9 to Sta. 364+81 (Bridge Omit)
 Sta. 364+81 to Sta. 381+45

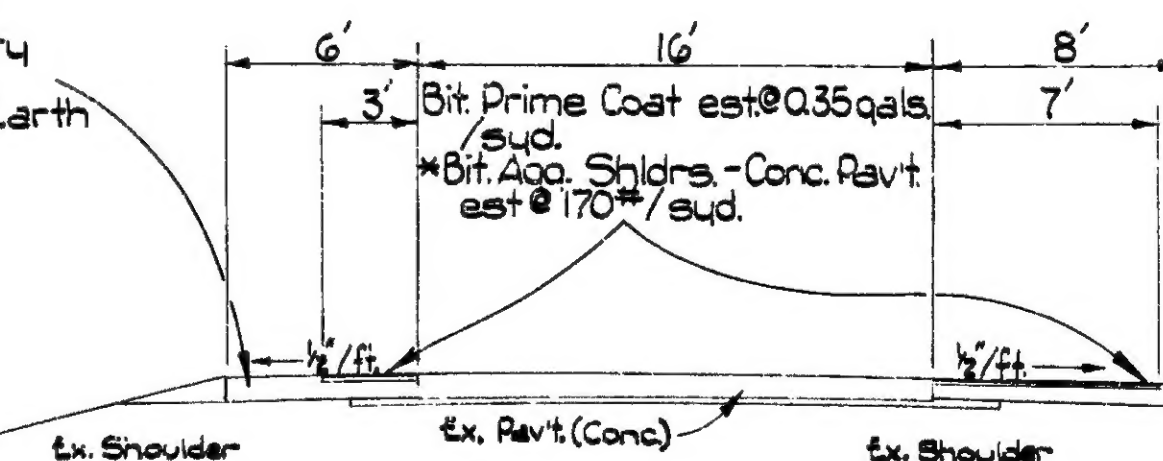
** The shoulder reconstruction along the acceleration and deceleration lanes at Jamet St. in Mackinaw City, differs from the typical cross-section in that the Earth Exc. will be 7 1/2' deep x 8' wide and the proposed Bit. Aq. Shldr. width will be 7'.

Excavate exist. shoulder material 7 1/2' deep x 6' wide and place 6' of Class AA Shoulders. Compact to 100% density prior to priming. Bottom of trench is to be compacted to 95% density. (Inc. to Earth Exc. trenching).



SECTION TO APPLY ON RAMPS
 Jamet Street Intersection

Excavate existing shoulder Material 7 1/2' deep x 6' wide & place 6' of Class AA Shoulders. Compact to 100% density prior to priming. Bottom of trench to be compacted to 95% density. (Inc. to Earth Excavation Trenching)



SECTION TO APPLY ON RAMPS
 US-31 & M-108 Interchange

Excavate existing shldr. material 7 1/2' deep x 8' wide & place 6' of Class AA Shoulders. Compact to 100% density prior to priming. Bottom of trench to be compacted to 95% density. (Inc. to Earth Exc.)

MISCELLANEOUS ESTIMATES
THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT
THE PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN
AND PROFILE SHEETS.

MICH. PROJ.: 1-75-5 (14) 305
STATE PROJ.: I 16091C C16
I 16092C C16
I 24071C C5

STATE PROJECT: I-16091C C16

Reshaping Non-Skid Surface 360 Stas.
• Class AA Shoulders 14,032 Tons
• Calcium Chloride, Applied 42 Tons
• Water - 1000 Gallon Units 172 Units
Maintaining Traffic 17.33 Miles

STATE PROJECT: I-16092C C16

Reshaping Non-Skid Surface 1,757 Stas.
• Class AA Shoulders 25,442 Tons
• Calcium Chloride, Applied 76 Tons
• Water - 1000 Gallon Units 305 Units
Maintaining Traffic 30.46 Miles

STATE PROJECT: I-24071C C5

Earth Excavation - 5,644 C. Yds.
Class AA Shoulders 9,027 Tons
Calcium Chloride, Applied 27 Tons
Water - 1000 Gallon Units 108 Units
Maintaining Traffic 3.16 Miles

• THESE ARE ESTIMATED QUANTITIES AND THE CONTRACTOR SHALL NOT START
PRODUCTION UNTIL FINAL DETERMINATION OF ACTUAL QUANTITIES NECESSARY
ARE DETERMINED BY THE ENGINEER.

MICH. PROJ.: 1-75-5(14)305

STATE PROJ.: I 16091C C16
I 16092C C16
I 24071C C5

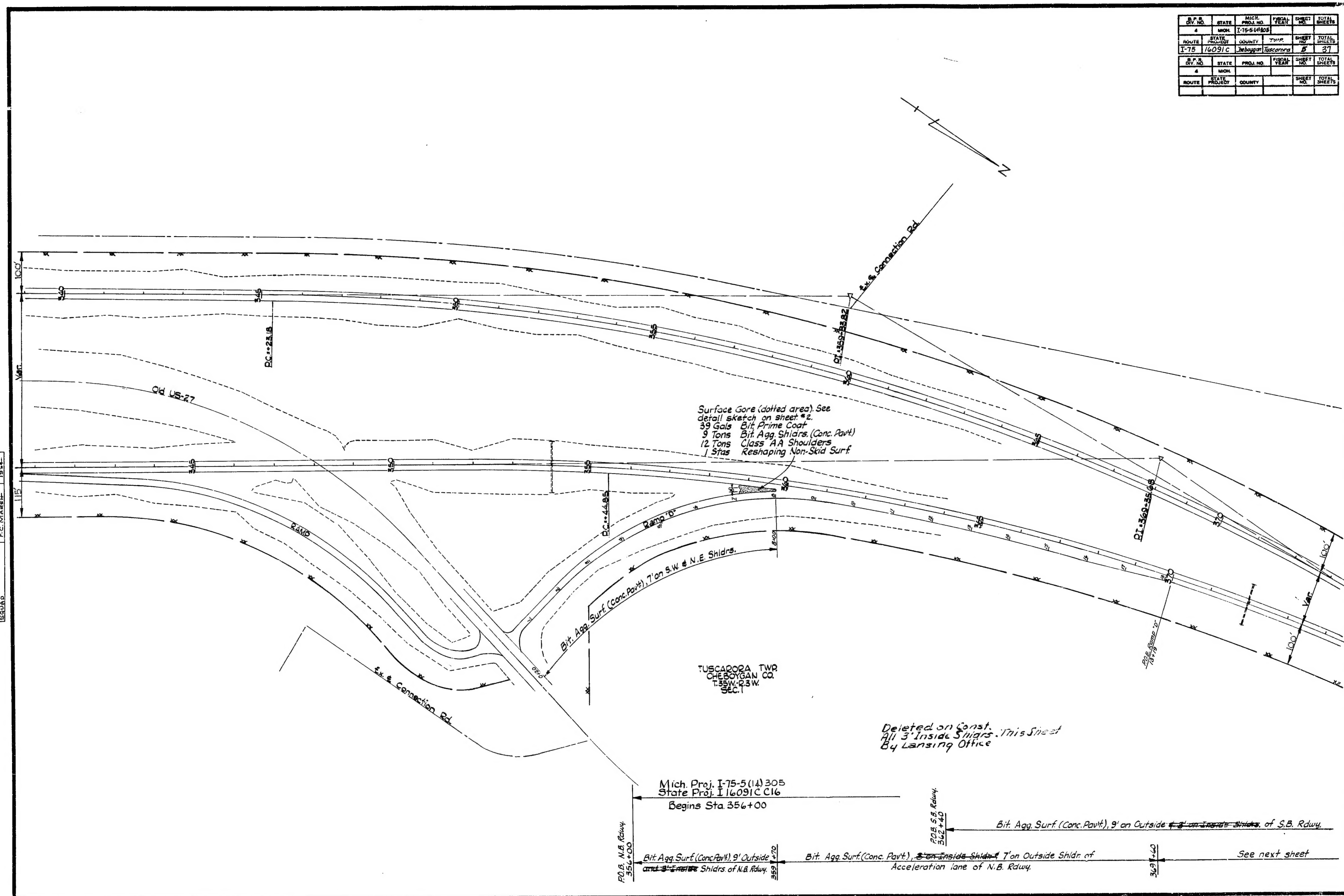
NOTES APPLYING TO STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED
ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHER-
WISE INDICATED.

DOUBLE STEEL BEAM GUARD RAIL E-4-A-140B
STEEL BEAM GUARD RAIL E-4-A-137E

S.P. NO.	STATE	MICH. PROJ. NO.	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
4	MI.	075-5(14)305			
ROUTE	STATE	COUNTY	PROJECT	SHEET NO.	TOTAL SHEETS
1-75	MI.	WASHTENAW	16091C C16, 16092C C16, 24071C C5	4	37
S.P. NO.	STATE	MICH. PROJ. NO.	FED. PROJ. NO.	SHEET NO.	TOTAL SHEETS
4	MI.				
ROUTE	STATE	COUNTY	PROJECT	SHEET NO.	TOTAL SHEETS

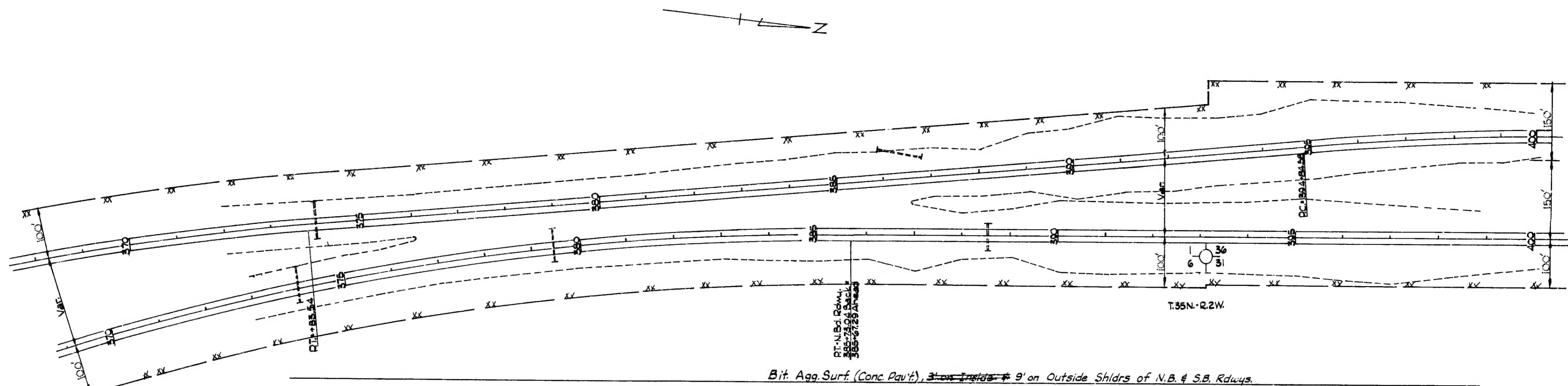
OPERATION	BY	DATE
FINAL DESIGN	C. R. King	Nov. 1964
Traced	"	12-18-64
R. Q. W. Checked		



16091CC16,16092CC16, 24071CC5	STATE PROJECT	FEDERAL PROJECT	SHIN
	1609/C	155-840205	

S.P.R. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-5(4)20			
ROUTE	STATE PROJECT	COUNTY	TOWNSHIP	SHEET NO.	TOTAL SHEETS
I-75	16091C	Cheboygan	Muscorora Rd	6	37

Station Equation
N. Bound Rdwy.
Sta. 385+73.04 Back •
Sta. 385+67.29 Ahead
Line Lengthens 5.75'



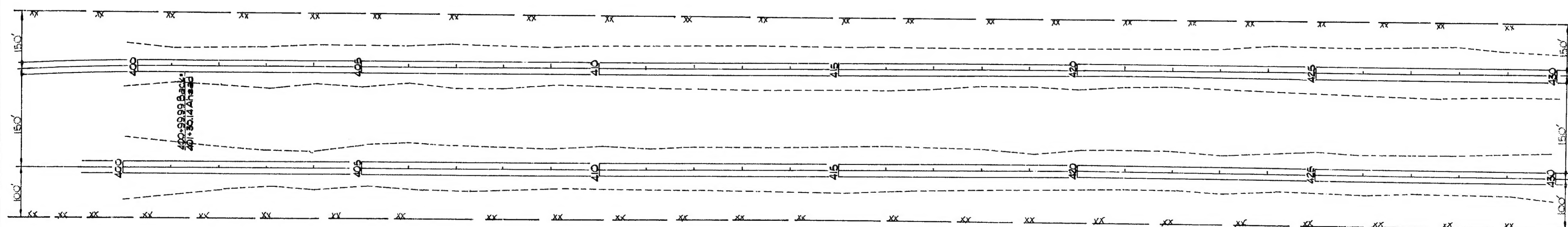
Bit. Agg. Surf. (Conc. Pav't), ~~3' on Inside &~~ 9' on Outside Shldrs of N.B. & S.B. Rdws.

OPERATION	BY	DATE
FINAL DESIGN	C.R. KING	Nov. 1964
INKED	"	12-16-64
ROW CHECKED		
SQUAD	F.C. MARSH	1964

Station Equation

S. Sound Rdwy. Sta. 400+99.99 Back = Sta. 401+30.14 Ahead, Line Shortens 30.15'
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Sec. 36
T.35N.-R.2W.

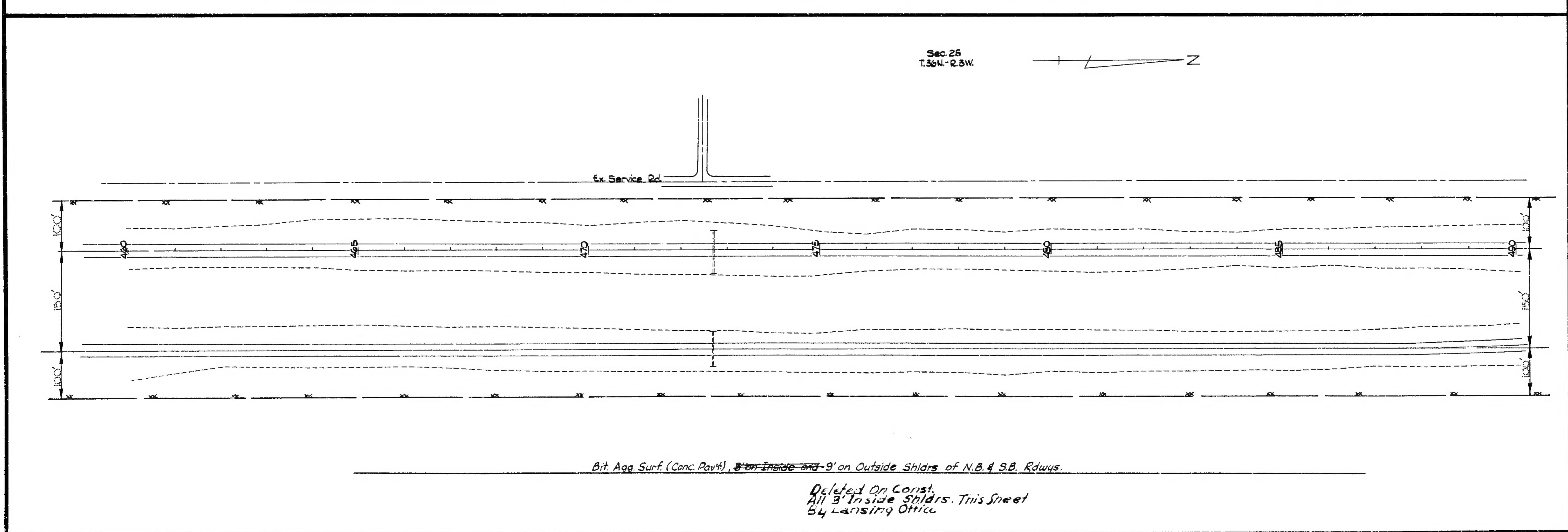


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All 3' Inside Shldrs. This Street
By Lansing Office

Bit. Agg. Surf. (Conc. Pavt.), ~~3' on Inside &~~ 9' on Outside Shldrs. of N.B. & S.B. Rdwys.

16091CC16, 16092CC16, 24071CC5	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
	16091C	1-75-504805	6

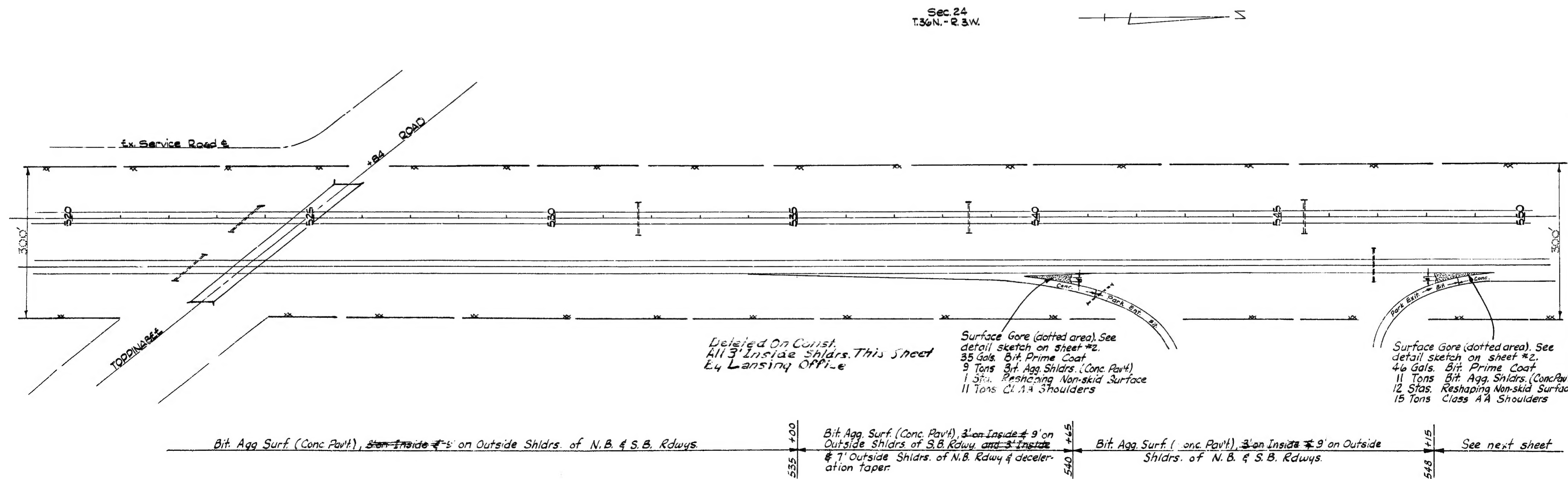
OPERATION	BY	DATE
FINAL DESIGN	C.E. King	Nov. 1964
INKED	"	12-15-64
R.O.W. CHECKED		
SQUAD	F.C. MAESTR	1964



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All 3' Inside Shldrs. This Sheet
By Lansing Office

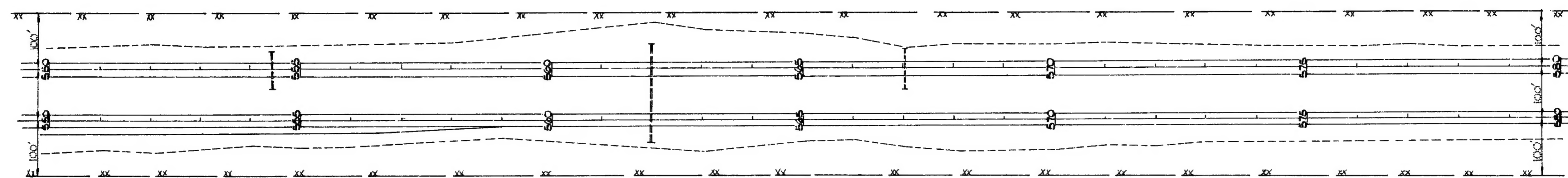
FILE NO. USE NO. 380 SYNCHIL	16091CC16, 16092CC16, 24071CC5	STATE PROJECT 16091C	FEDERAL PROJECT 175-5(4)305	SHEET NO. 7
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OPERATION	BY	DATE
FINAL DESIGN	C.E. Krings	Nov. 1964
INCKD	"	12-15-64
ROW. CHECKED	EC. MARCH	1964



1609CC16	16092CC16,	STATE PROJECT	FEDERAL PROJECT	SHI
2407CC5		160910	274-51(10)2	A

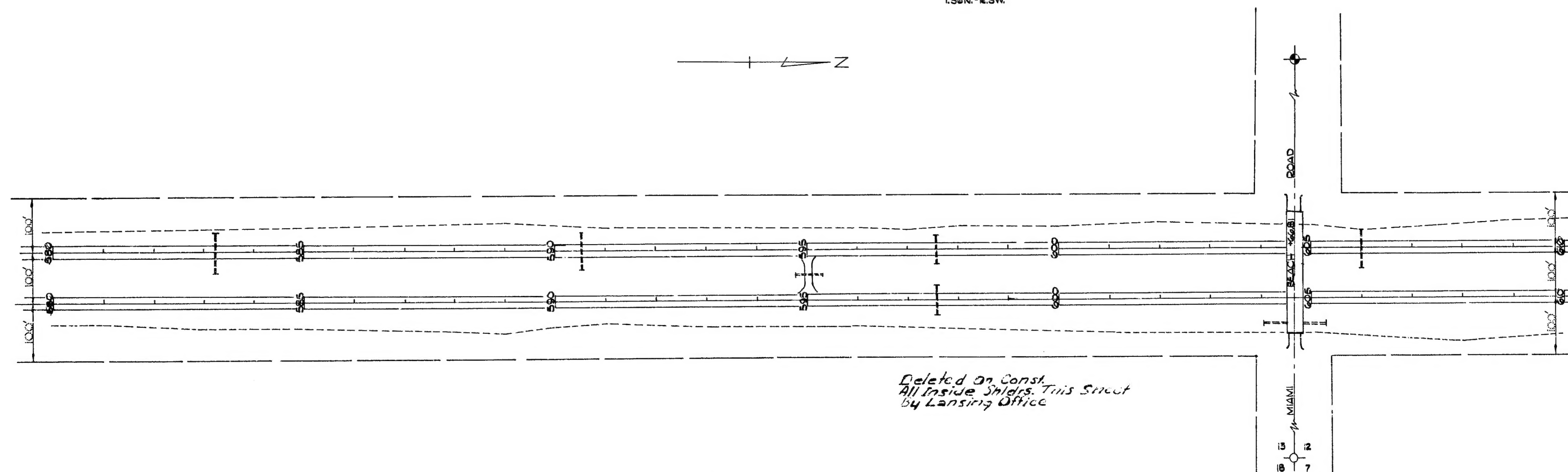
S.P. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-75-510305			
ROUTE	STATE	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
1-75	16091C	Chickasaw	Burt	9	37
S.P. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-75-510305			
ROUTE	STATE	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
1-75	16091C	Chickasaw	Burt	9	37



24 13
19 18 T.36N.-R.2W.
Bit. Agg. Surf. (Conc. Pavt), 3' on Inside & 9' on Outside Shldr. of S.B. Rdwy. and 3' on Inside & 7' on Outside Shldr. of N.B. Rdwy.

Bit. Agg. Surf. (Conc. Pavt), 3' on Inside & 9' on Outside Shldr. of N.B. & S.B. Rdwys.

T.36N.-R.3W.



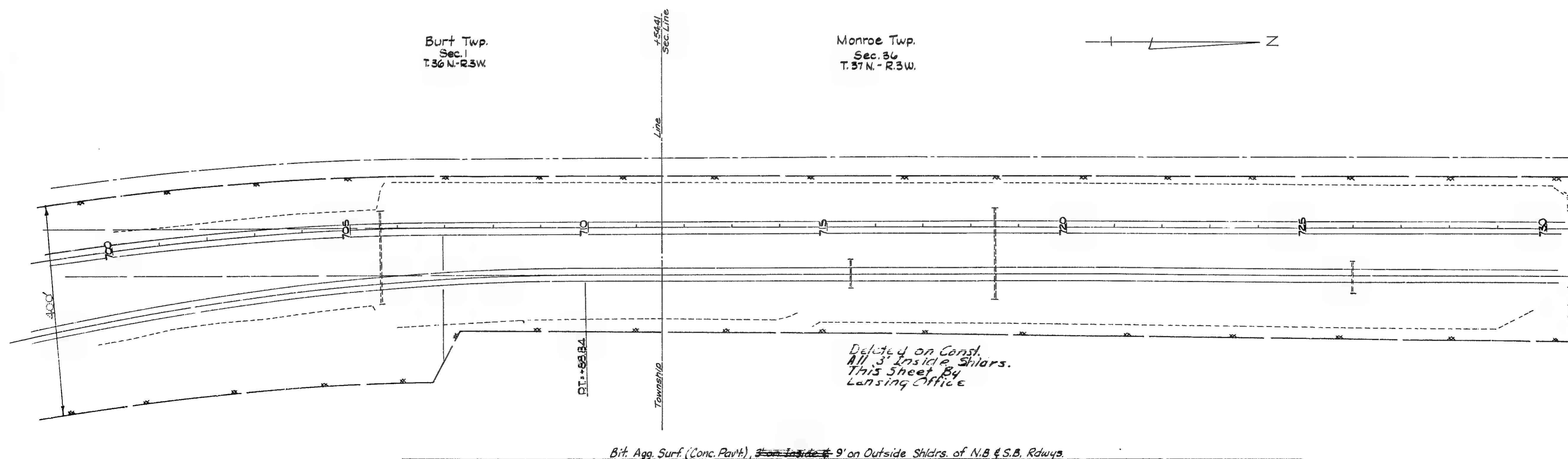
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All Inside Shldr. This Street
by Lansing Office

Bit. Agg. Surf. (Conc. Pavt), 3' on Inside & 9' on Outside Shldr. of N.B. & S.B. Rdwys.

OPERATION	BY	DATE
FINAL DESIGN	C. E. King	Nov. 1964
ENGRS. CHECKED	...	12-12-64
SQUAD	F. C. Marsh	1964

16091CC16, 16092CC16, 2407ICC5
16091C 1-75-510305 9

OPERATION	BY	DATE
FINAL DESIGN	C. E. Kring	Nov. 1964
INKED	" "	12-18-64
R.O.W. CHECKED		
SIGNED	F. C. Mares	1964

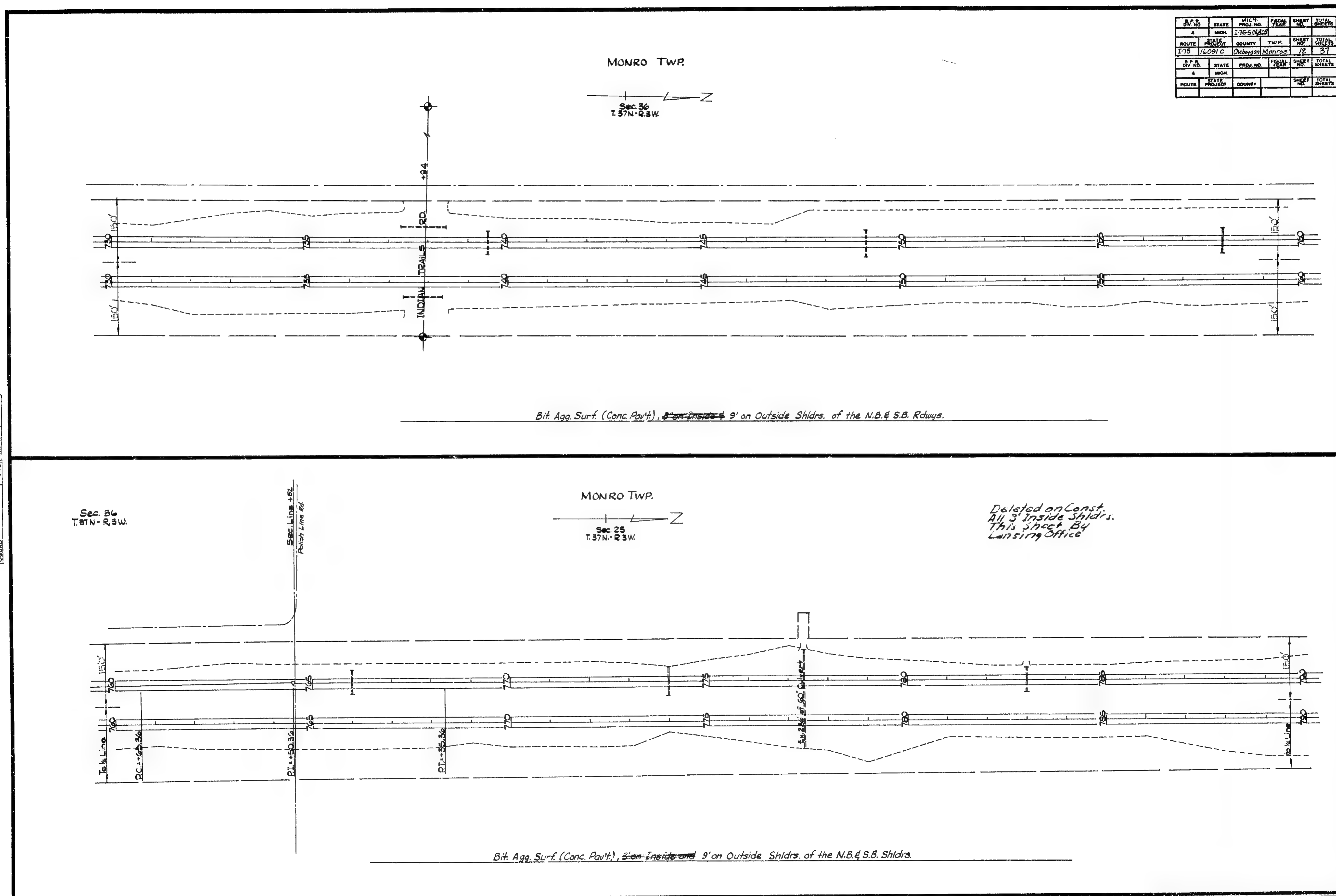


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All 3' Inside Shlars.
This Sheet By
Lansing Office

Bit. Agg. Surf. (Conc. Pavt.), ~~3' on Inside~~ 9' on Outside Shldrs. of N.B. & S.B. Rdwys.

16091CC16, 16092CC16, 24071CC5	STATE PROJECT	FEDERAL PROJECT	SHEET NO.
	16091C	75-504305	11

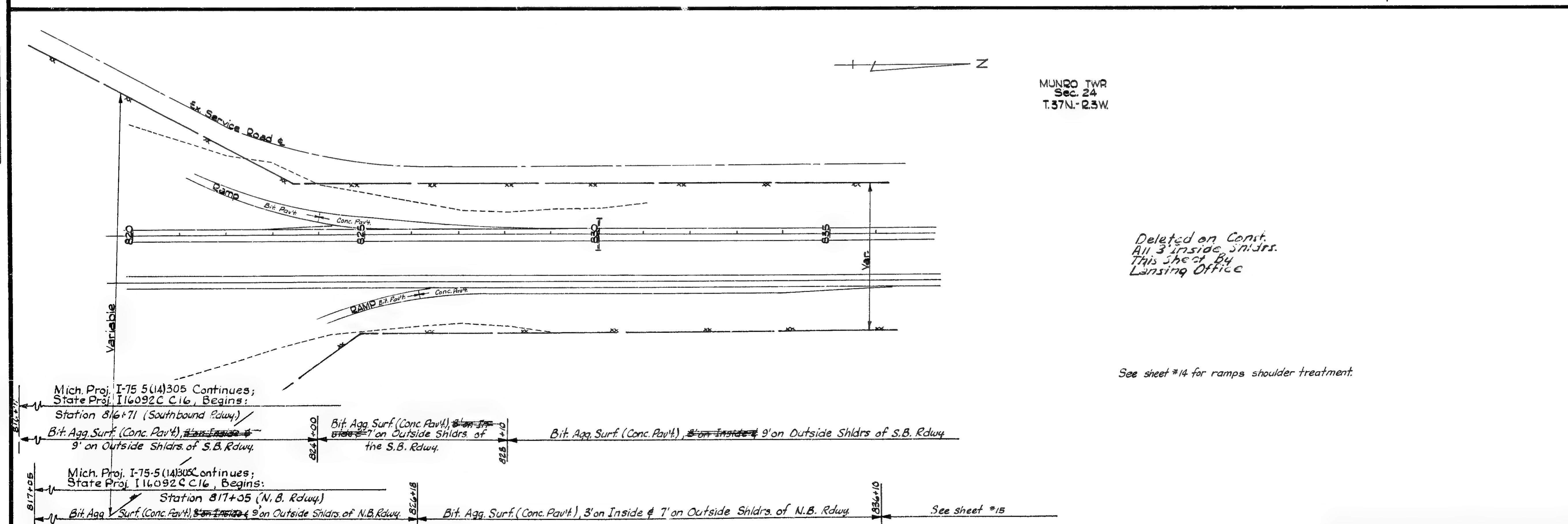
OPERATION	BY	DATE
FINAL DESIGN	C.E. King	12/15/44
REVIEWED		
REVIEWED		
SQUAD	F.C. MARESH	1944



S.P. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-15-514200		72	37
ROUTE	STATE	PROJECT	COUNTY	TWP.	SHEET NO.
1-15	16091C	Cherash Monroe			72
S.P. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	1-15-514200		72	37
ROUTE	STATE	PROJECT	COUNTY	TWP.	SHEET NO.
1-15	16091C	Cherash Monroe			72

16091CC16, 16092CC16,
24071CC5

OPERATION	BY	DATE
FINAL DESIGN	C. P. Kring	Nov. 1964
INKED	" "	12-19-64
ROW. CHECKED		
COPIES	FC Measey	1964

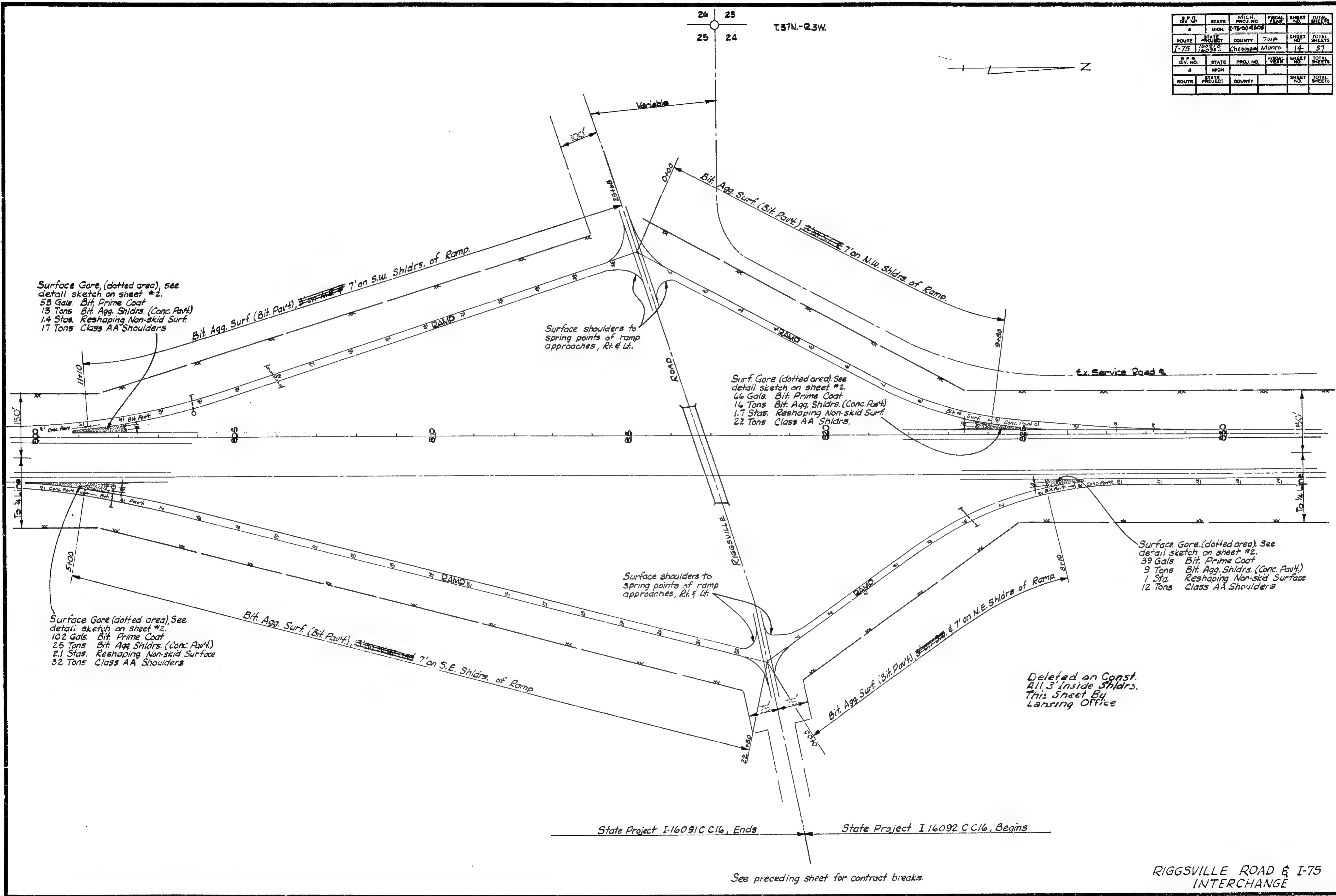


See sheet #14 for ramps shoulder treatment.

FILE NO. 16091CC16, 16092CC16, 24071CC5	STATE PROJECT 16091C 16092C	FEDERAL PROJECT E75-S(M)205	SHEET NO. 13
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OPERATIONS	BY	DATE
DESIGN	C.E. RING	12/2/44
INSTR. CHANGED
SQUAD	F.C. MARSH	1944

S.P. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4		16092			
ROUTE	PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
I-75	16092	Chesbourn	Monte	14	37
S.P. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4		16092			
ROUTE	PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
I-75	16092	Chesbourn	Monte	14	37

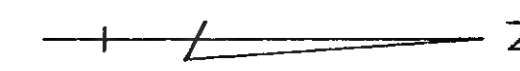


RIGGSVILLE ROAD & I-75
 INTERCHANGE

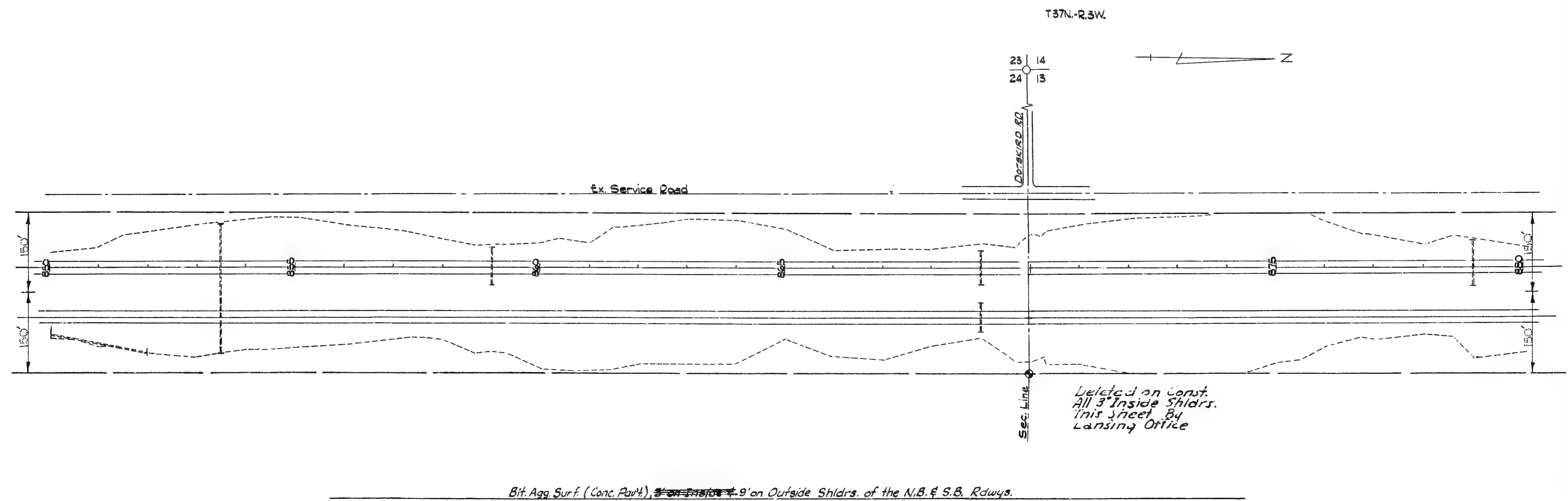
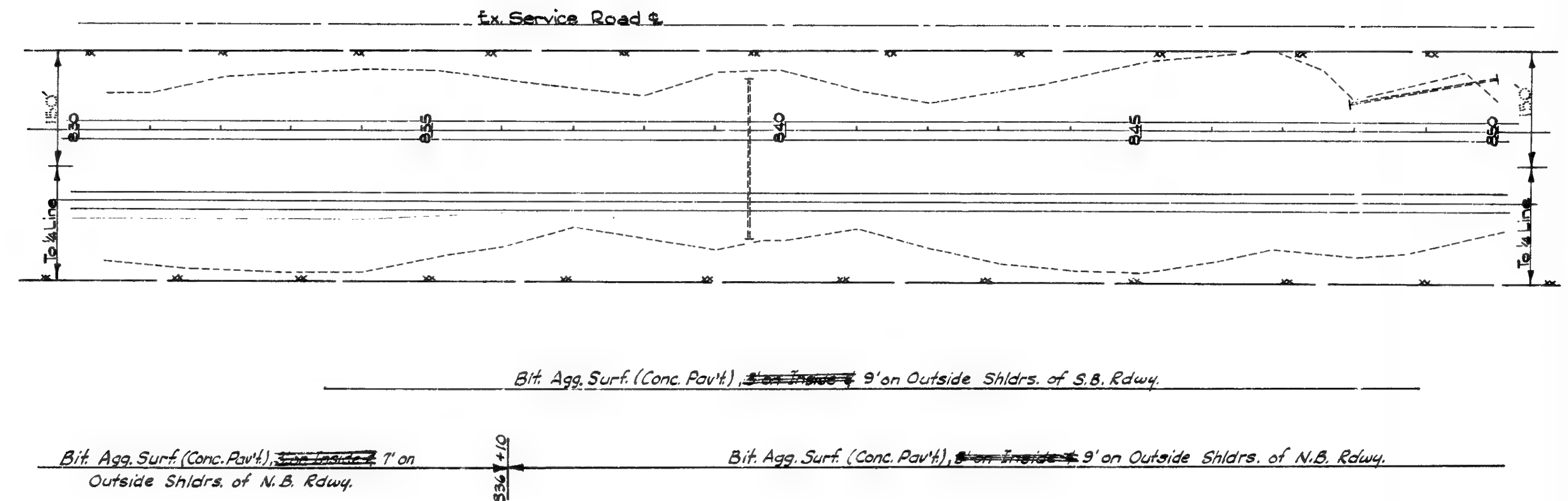
16092CC16, 16092CC16,	16092CC16,	16092CC16,	16092CC16,	16092CC16,	16092CC16,
24071CC5					

OPERATION	BY	DATE
FINAL DESIGN	C. R. Ardy	10/1/54
FIELD	"	12/16/54
COM. CHECKED	EC. MARSH	1954
REVISION		

MUNRO TWP.
SEC. 24
T.37N.-R.23W.



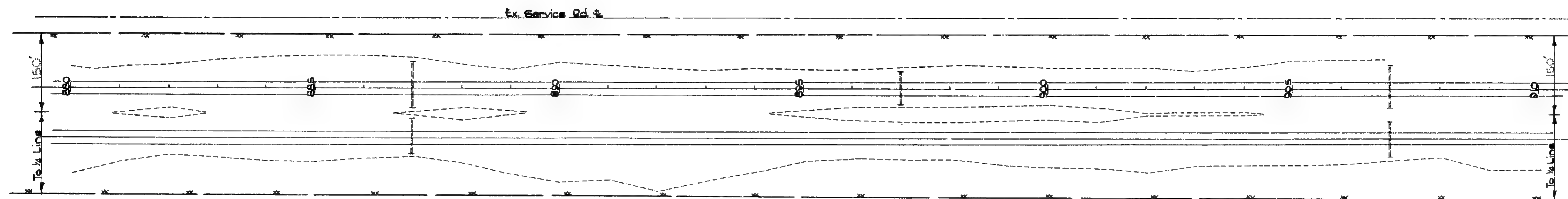
S.P. & DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	176-5 (4300)			
ROUTE	PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
I-75	16092C	Washtenaw	Munro	15	37
S.P. & DIV. NO.	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.				
ROUTE	PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



S.P.R. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4		1-75-5 (14M)			
ROUTE	STATE	COUNTY	T.W.R.	SHEET NO.	TOTAL SHEETS
I-75	16092C	Vincennes	Munro	16	37
S.P.R. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4					
ROUTE	STATE	COUNTY	T.W.R.	SHEET NO.	TOTAL SHEETS

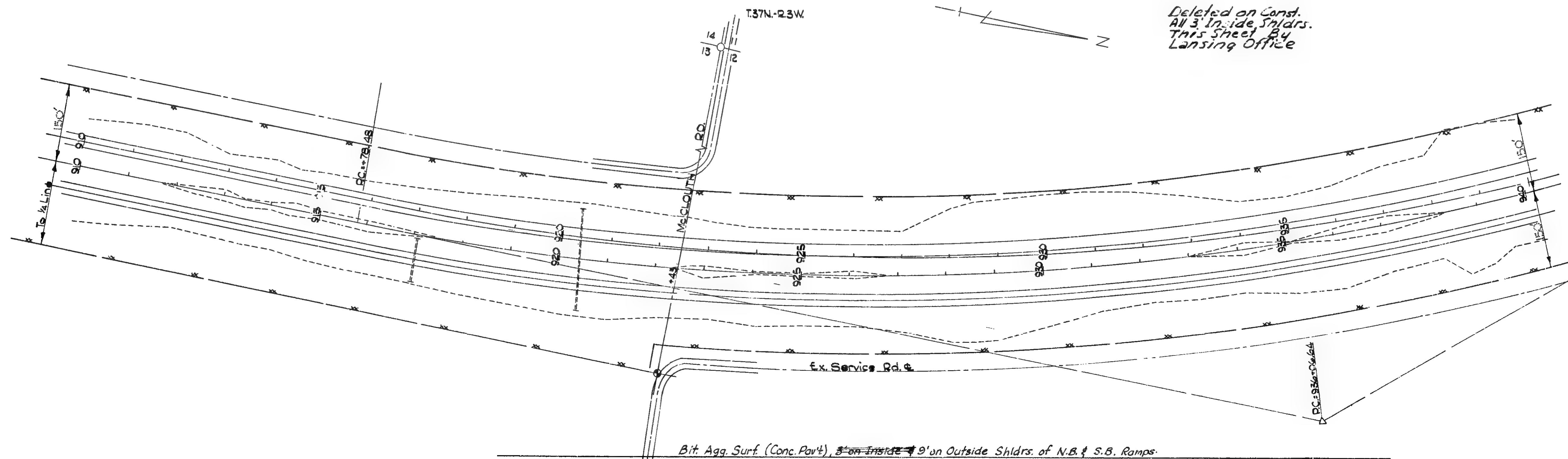
Sec. 13
T.37N.-R.3W.

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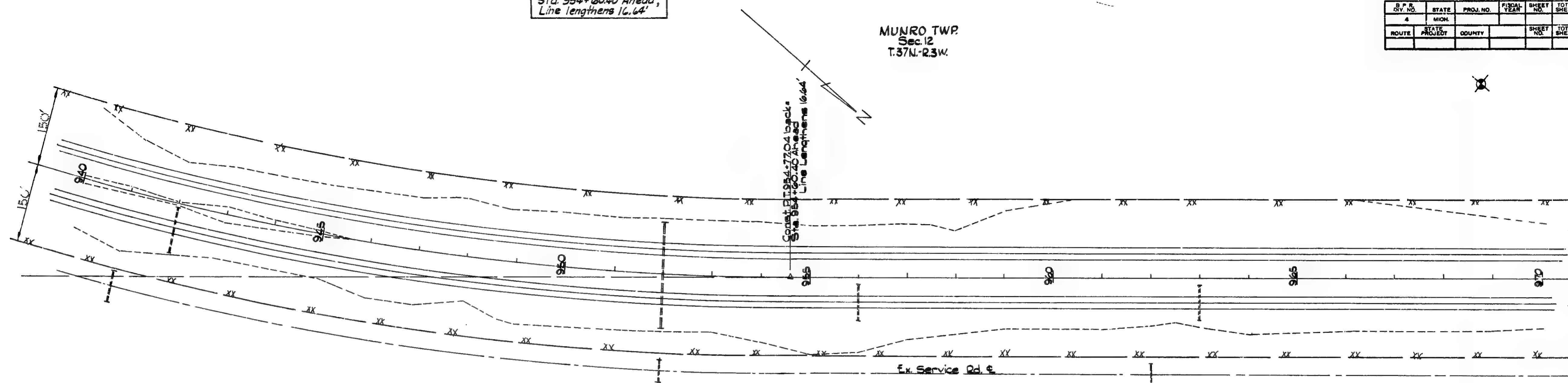
Bit. Agg. Surf. (Conc. Pavt), ~~3' on Inside~~ 9' on Outside Shldr. of the N.B. & S.B. Rdways.

OPERATION	BY	DATE
FINAL DESIGN	C. R. King	12-18-54
CHECKED		
DESIGNED	F. C. M. Smith	1954



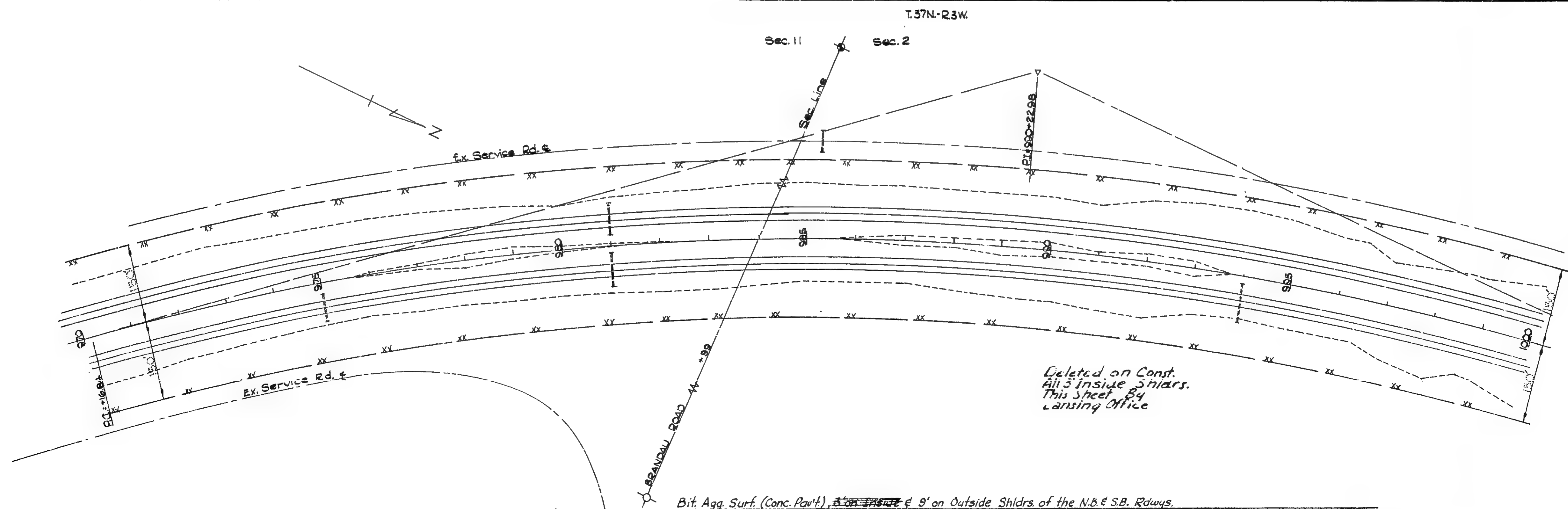
1609IC16, 16092CC16, 2407IC5

MUNRO TWP.
Sec. 12
T.37N.-R.3W.



Bit. Agg. Surf. (Conc. Pav't), ~~2' on Truss~~ 9' on Outside Shldrs. of the N.B. & S.B. Rdwys.

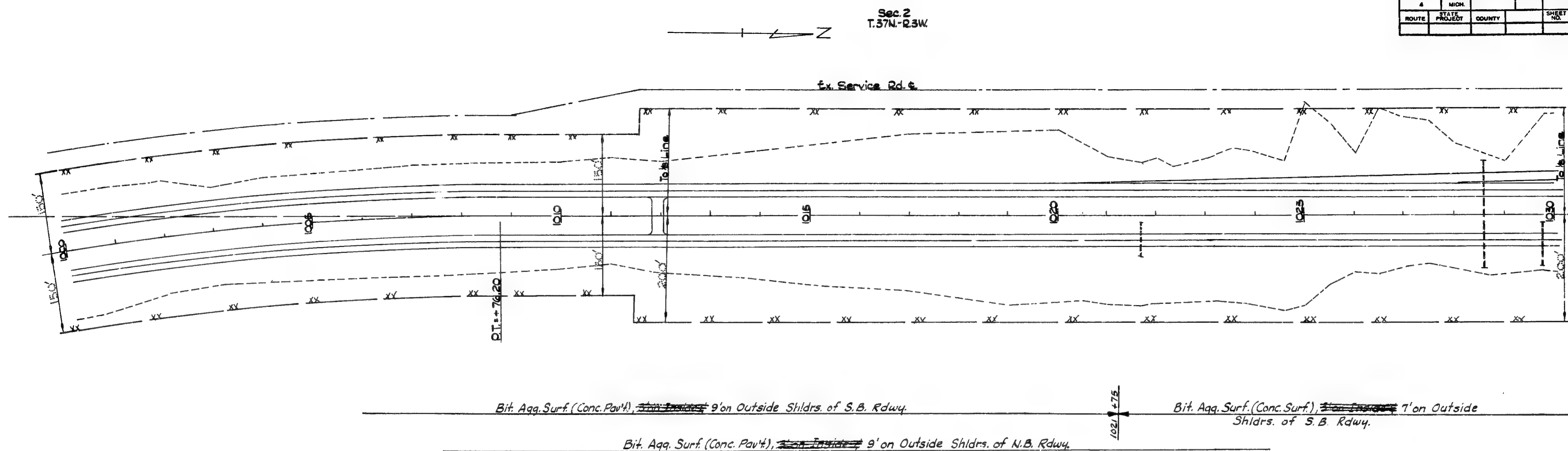
OPERATION	BY	DATE
FINAL DESIGN	C.P. Kring	Nov. 1964
INKED	" "	12-17-64
R.O.W. CHECKED		
SIGNED	E.C. Mearns	1964



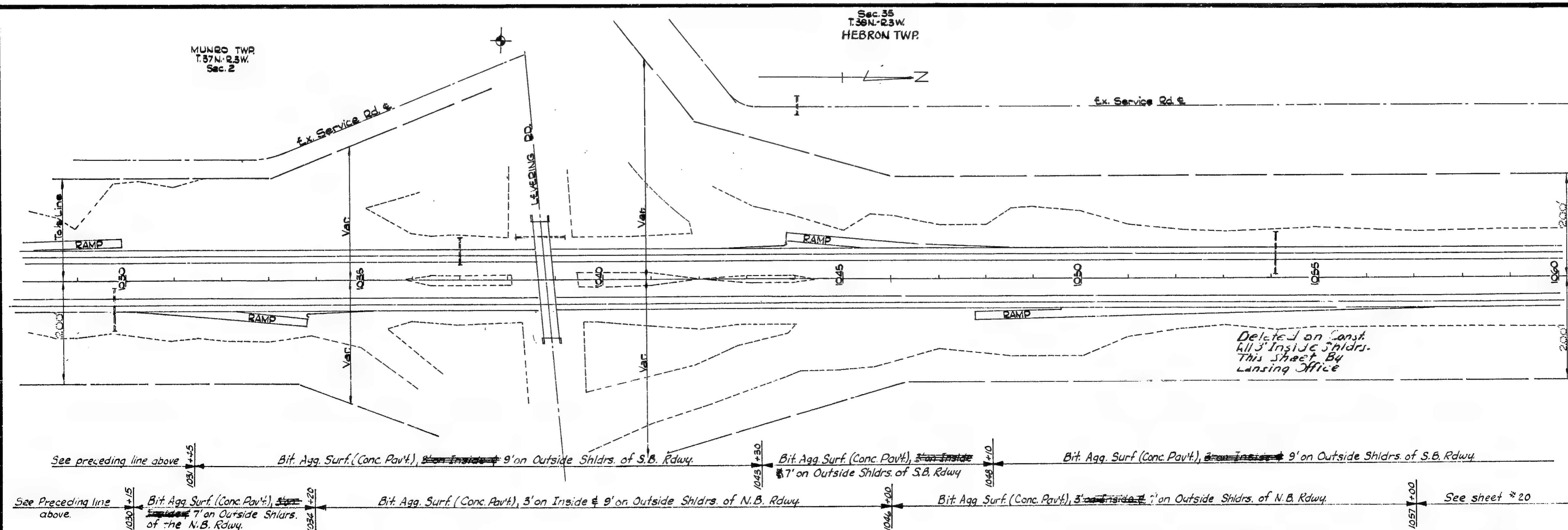
Deleted on Const.
All 5 inside shields.
This sheet By
Lansing Office

Bit. Agg. Surf. (Conc. Pav't), ~~3' on Inside~~ & 9' on Outside Shldrs. of the N.B. & S.B. Rdwys.

B.P.R. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.	T-15-543035			
ROUTE	STATE PROJECT	COUNTY	TWP.S. MUNIC. & WATER	SHEET NO.	TOTAL SHEETS
T-15	16092 C	Chesbrough		18	37
B.P.R. DIV. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	MICH.				
ROUTE	STATE PROJECT	COUNTY		SHEET NO.	TOTAL SHEETS



OPERATION	BY	DATE
FINAL DESIGN	C.R. Kring	Nov. 1964
INKED	"	12-16-64
R.O.W. CHECKED		
SIGNED	E.C. Maessu	1964



Deleted on Const.
all 3' Inside Childs.
This sheet By
Lansing Office

16091CC16, 16092CC16, 24071CC5	STATE PROJECT	FEDERAL PROJECT	SWEET NO.
	16092	11-75-14305	18

OPERATION	BY	DATE
FINAL DESIGN	C.R. King	Nov. 1964
INKED	" "	12-17-64
ROW. CHECKED	EC MAPSH	1964



S.P.R. DIV. NO. 4	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	STATE PROJECT	MICH. COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
I-75	16092 c	Chubbeygon	Hobron	20	37
S.P.R. DIV. NO. 4	STATE	PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
	STATE PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS

HEBRON TWP.
Sec. 35
T.38N. R.3W.

Ex. Service Rd. \$

35	26
----	----

Bit. Agg. Surf. (Conc. Pavt.), ~~4' on Inside & 9' on Outside~~ Shldrs. of the N.B. & S.B. Rdways

OPERATION	BY	DATE
FINAL DESIGN	C.R. KING	NOV. 1964
INKED	" "	12-17-64
R.O.W. CHECKED		
		1964

HEBRON TWP.
Sec. 26
T. 38 N. - R. 3 W.

Ex. Service Rd.

Deleted on Const.
All 3' Inside Shldr
This Sheet By
Lansing Office

Bit. Agg. Surf. (Conc. Pavt), ~~4" on Inside~~ 9' on Outside Shldrs. of the N.B. & S.B. Rdways

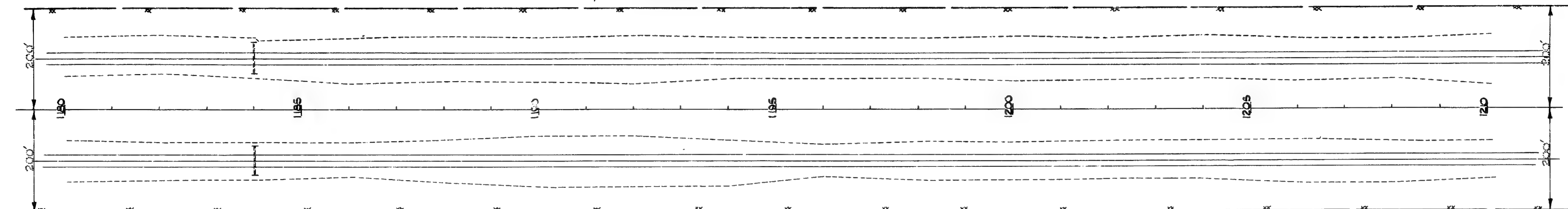
Bit. Agg. Surf (Conc. Pav't), ~~5' on Inside~~ 7' on Outside Shldrs. of S.B. Rdwy

Bit. Agg. Surf. (Conc. Pav't), 3' on Inside - 9' on Outside Shldrs. of N.B. Rdwy.

16091CC16, 16092CC16, 24071CC5	STATE PROJECT	FEDERAL PROJECT	SHEET NO
	16092c	175-344305	20

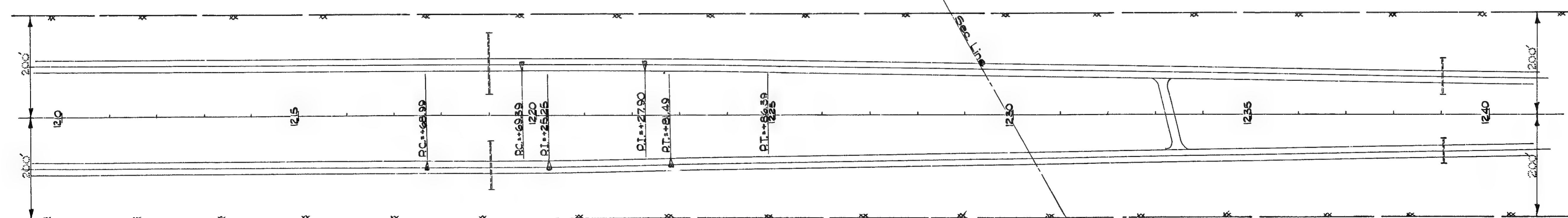
OPERATION	BY	DATE
FINAL DESIGN	C. P. King	Nov. 1964
INKED	"	12-18-64
Q&W CHECKED	EC MAPSH	1964

Ex. Service Ed \$



Bit. Agg. Surf. (Conc. Pav't), ~~3' on Inside~~ 9' on Outside Shldrs. of the N.B. & S.B. Rdways.

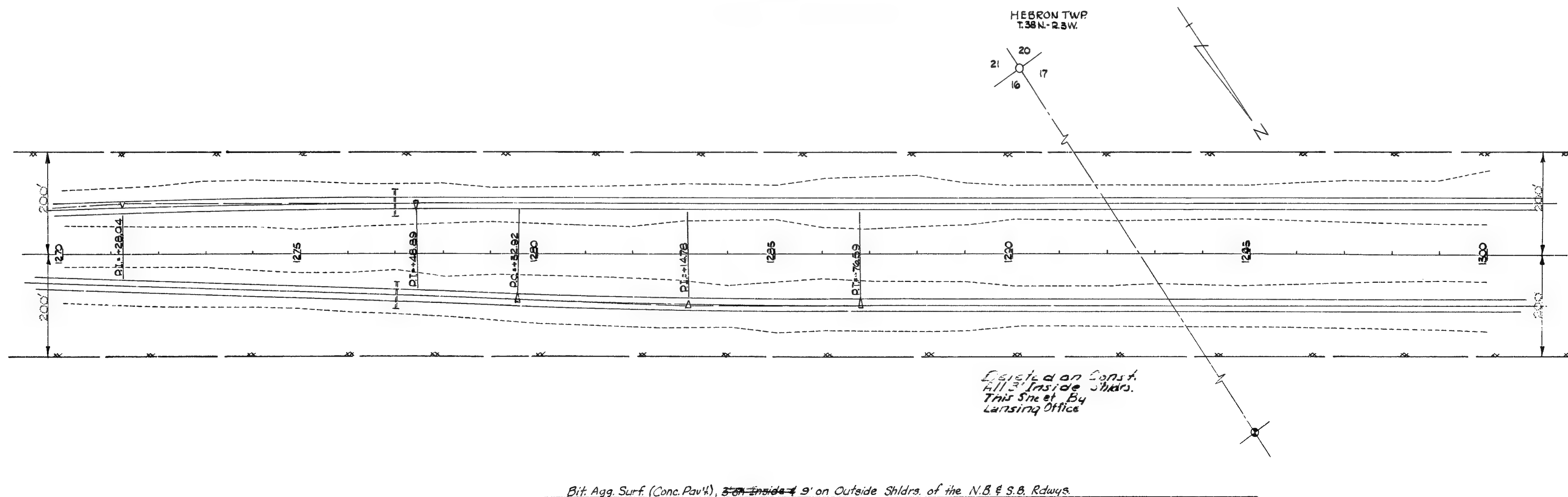
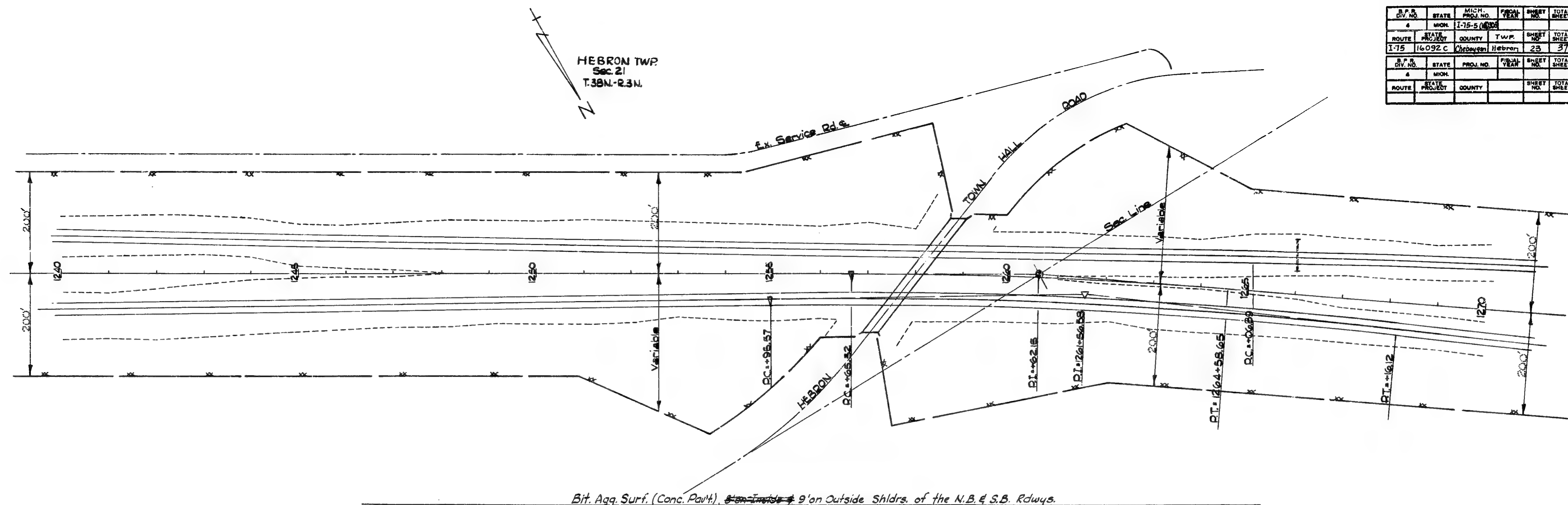
Deleted on Const.
All 3 Inside Shldr.
This Sheet By
Lansing Office

fx. Service Rd. e

Bit. Agg. Surf. (Conc. Pav't), ~~8" on Inside &~~ 9" on Outside Shldrs. of the N.B. & S.B. Rdwys.

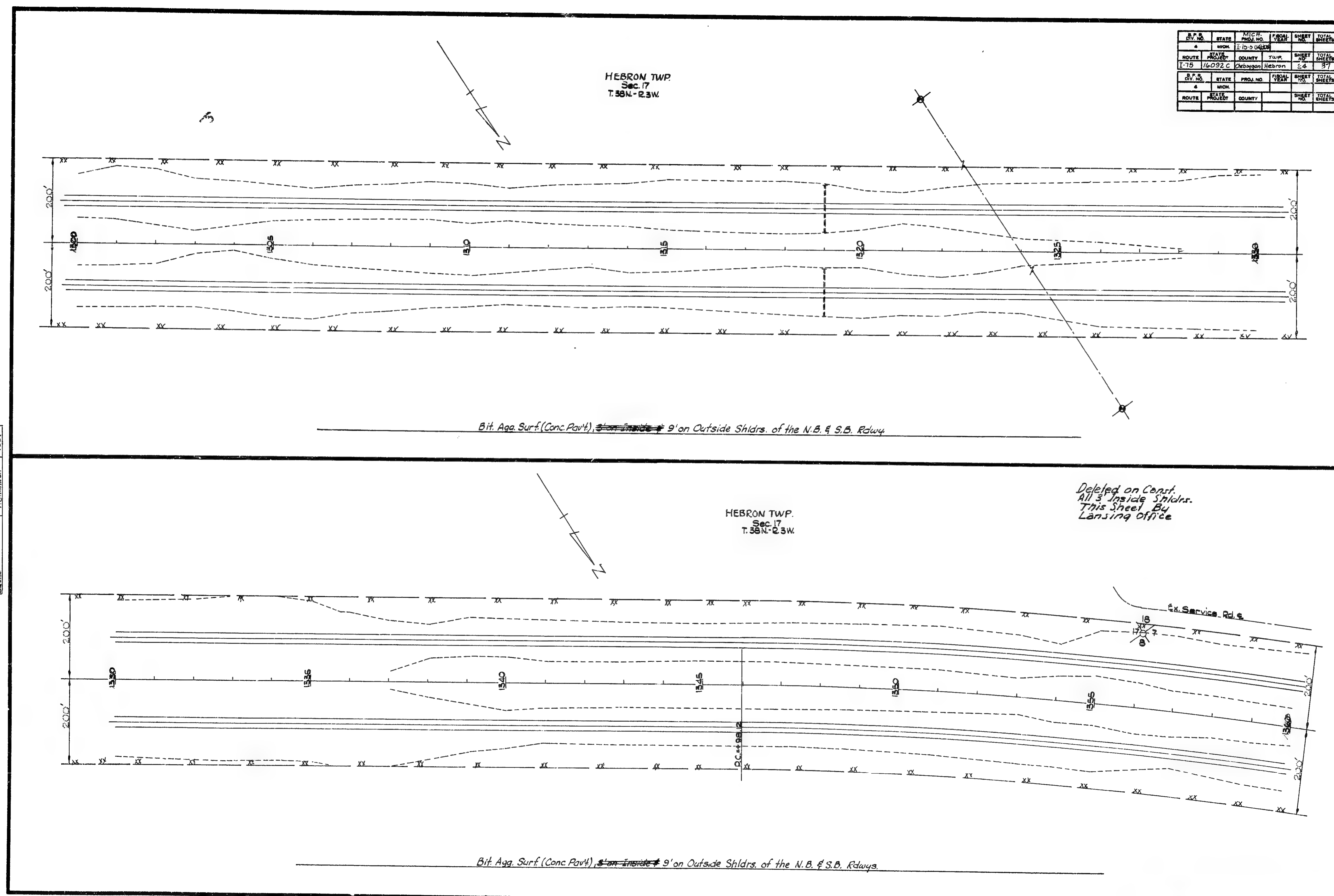
16091CC16, 16092CC16, 24071CC5	STATE PROJECT	FEDERAL PROJECT	SERIAL NO.
	16092C	175-304305	22

D.P.R.	STATE	MICH.	FISCAL	SHEET	TOTAL
NO.	NO.	PROJ. NO.	YEAR	NO.	SHEETS
4	MI.	1-15-5 (600)			
ROUTE	STATE	PROJECT	COUNTY	TWP.	TOTAL
1-15	MI.	16092 C	Hebron	23	37
D.P.R.	STATE	MICH.	FISCAL	SHEET	TOTAL
NO.	NO.	PROJ. NO.	YEAR	NO.	SHEETS
4	MI.	16092 C			
ROUTE	STATE	PROJECT	COUNTY	TWP.	TOTAL
1-15	MI.	16092 C	Hebron	23	37

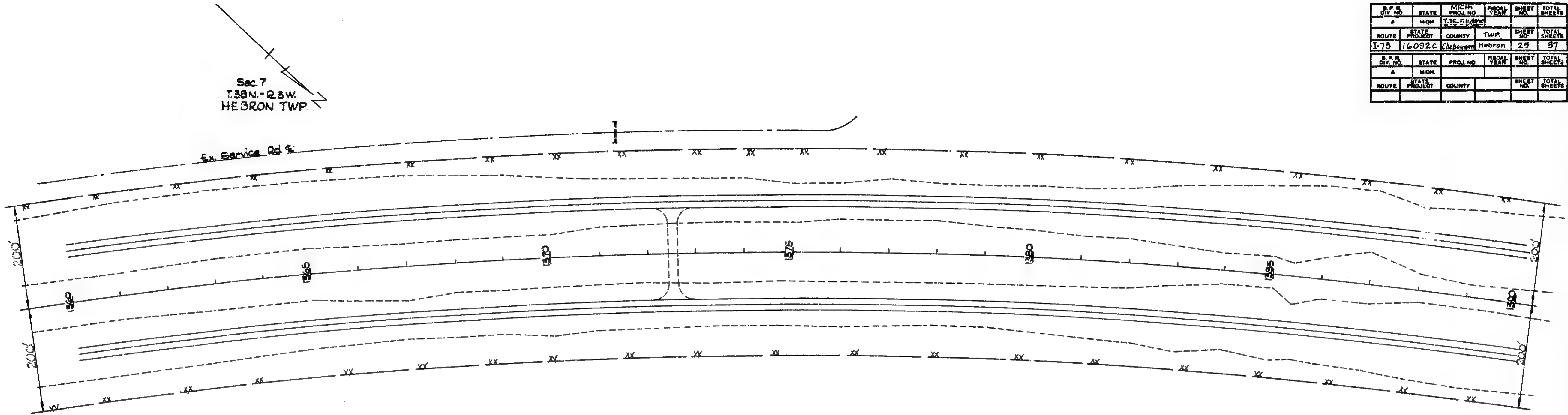


OPERATION	BY	DATE
FINAL DESIGN	D. Eberhard	Nov. 1944
REVISED	G. E. King	12-19-44
CHECKED	F. C. Marsh	1944
BY		

OPERATION	BY	DATE
FINAL DESIGN	D. Eberhard	Nov. 1964
INIED	C. R. King	12-18-64
R.O.W. CHECKED		
SQUAD	F. C. MAPSH	1964

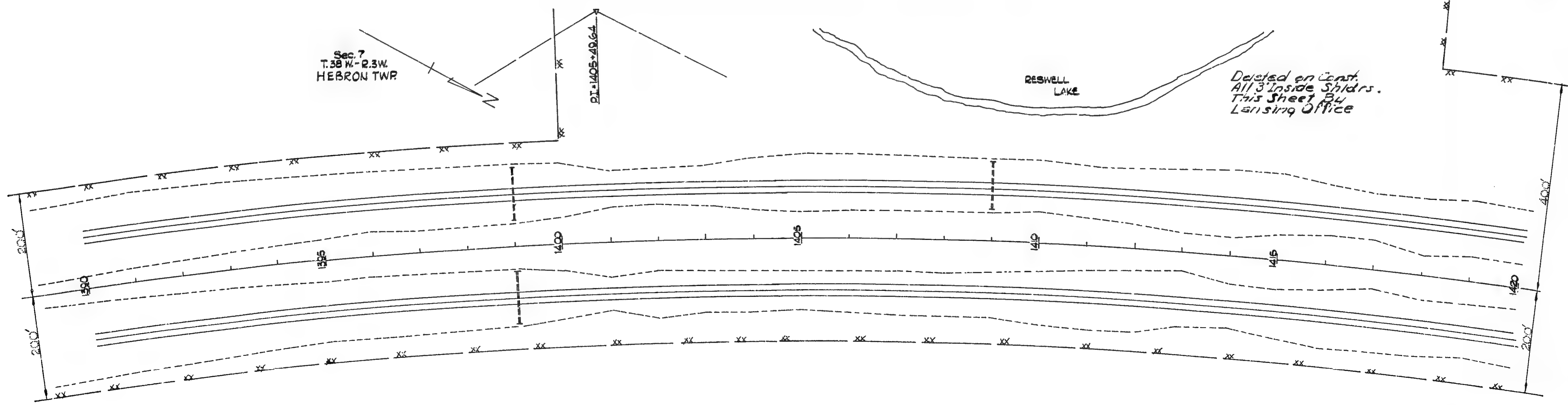


S.P. NO.	STATE	ROUTE	PROJECT	YEAR	SHEET NO.	TOTAL SHEETS
1-75	16092C	Hebron	Hebron	25	37	
S.P. NO.	STATE	ROUTE	PROJECT	YEAR	SHEET NO.	TOTAL SHEETS
1-75	16092C	Hebron	Hebron	25	37	



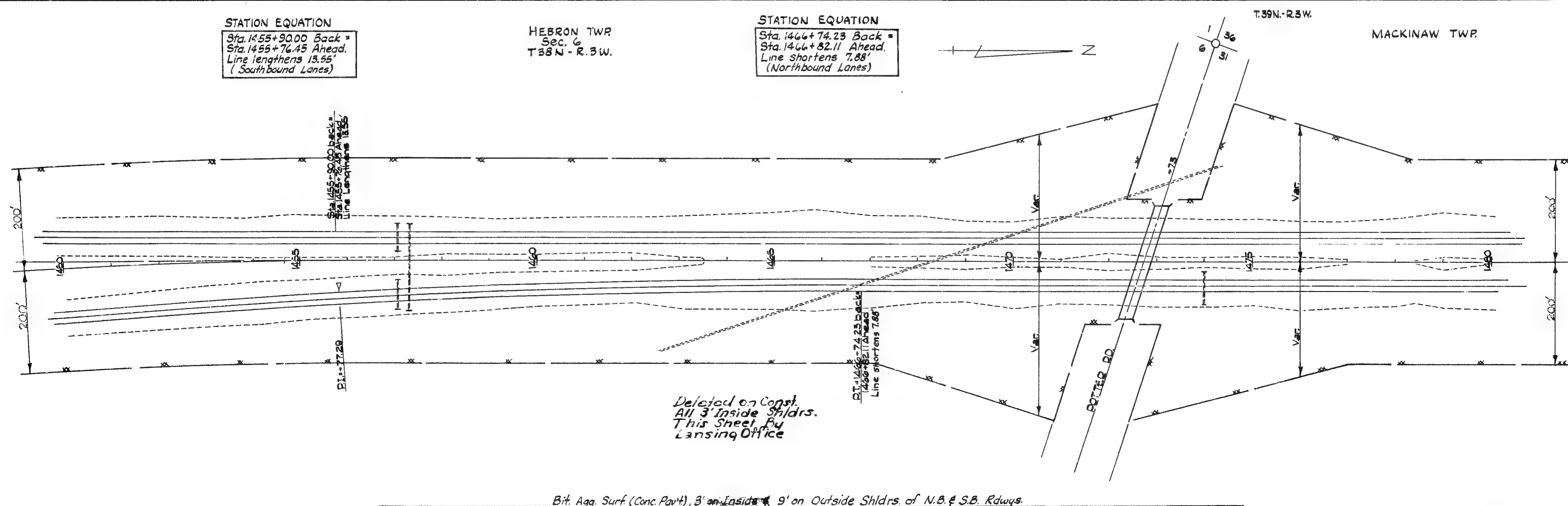
Bit Agg. Surf. (Conc. Pav't), 8' on Inside & 9' on Outside Shldr. of the N.B. & S.B. Rdways.

OPERATION	BY	DATE
FINAL DESIGN	D. L. L. L.	12/8/54
FIELD CHECK	C. E. L. L.	12/8/54
DESIGN	E. C. L. L.	12/8/54



Bit Agg. Surf. (Conc. Pav't), 8' on Inside & 9' on Outside Shldr. of the N.B. & S.B. Rdways.

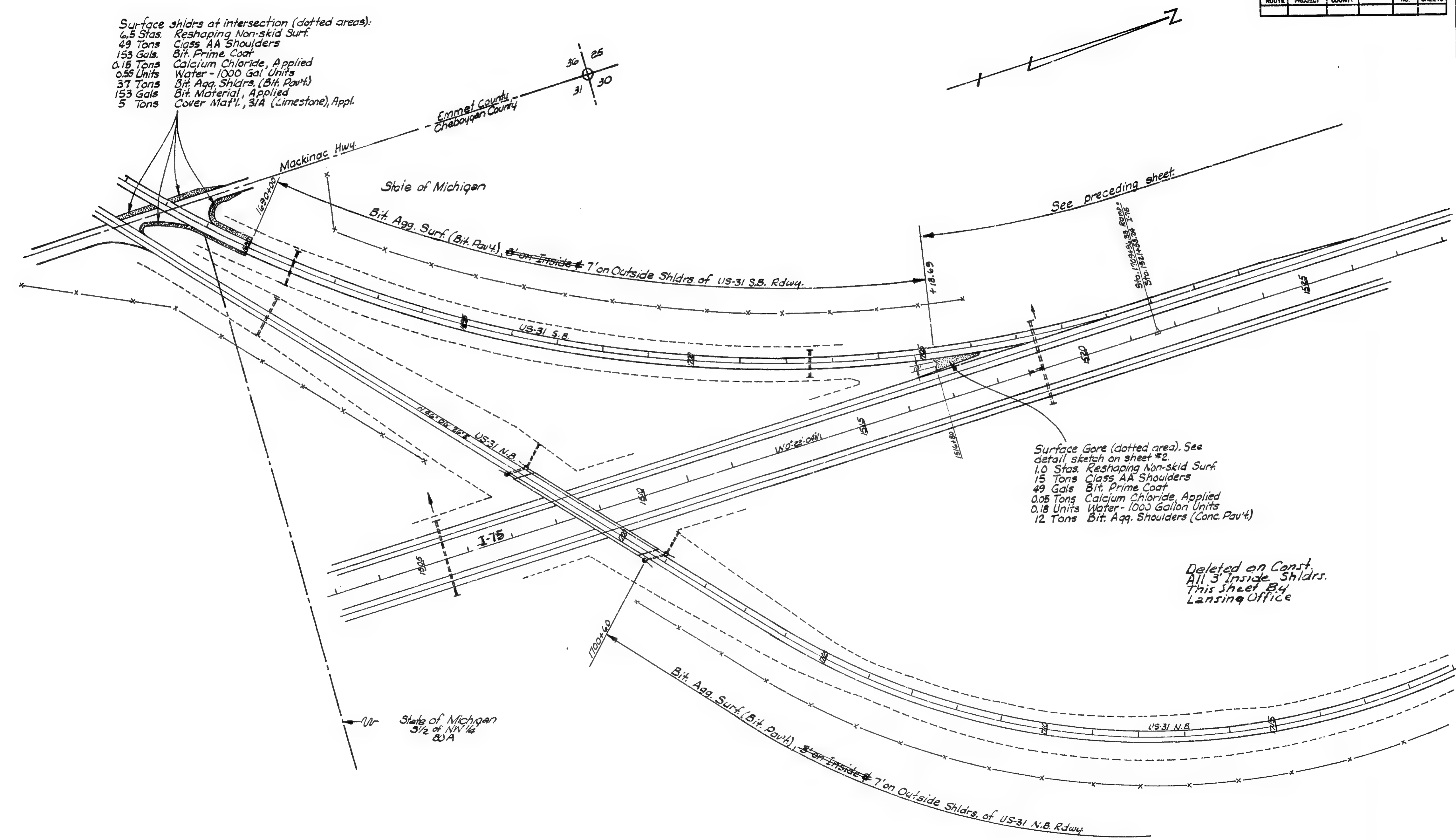
OPERATION	BY	DATE
FINAL DESIGN	D. Eberhard	Nov. 1964
INKED	C. R. Kring	12-18-64
R.O.W. CHECKED		
SCHEMATIC	F. C. MAPSH	1964-



16091CC16, 16092CC16, 24071CC5	STATE PROJECT	FEDERAL PROJECT	SHE NO.
	16092C	75-504805	2

S.P. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
1-15	MI	175 51400				
ROUTE	STATE	PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS
1-15	MI	6092C	Chesapeake	Madison	28	37
S.P. NO.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
1-15	MI	6092C				
ROUTE	STATE	PROJECT	COUNTY	TWP.	SHEET NO.	TOTAL SHEETS

Surface shldr. at intersection (dotted areas):
 6.5 Stas. Reshaping Non-skid Surf.
 49 Tons Class AA Shoulders
 153 Gals. Bit. Prime Coat
 0.15 Tons Calcium Chloride, Applied
 0.59 Units Water - 1000 Gal. Units
 37 Tons Bit. Agg. Shldr. (Bit. Pav't)
 153 Gals. Bit. Material, Applied
 5 Tons Cover Mat'l, 3/4 (Limestone), Appl.



Surface Gore (dotted area). See detail sketch on sheet #2.
 1.0 Stas. Reshaping Non-skid Surf.
 15 Tons Class AA Shoulders
 49 Gals. Bit. Prime Coat
 0.05 Tons Calcium Chloride, Applied
 0.18 Units Water - 1000 Gallon Units
 12 Tons Bit. Agg. Shoulders (Conc. Pav't)

Deleted on Const.
 All 3 Inside Shldr.
 This Sheet B.Y.
 Lansing Office

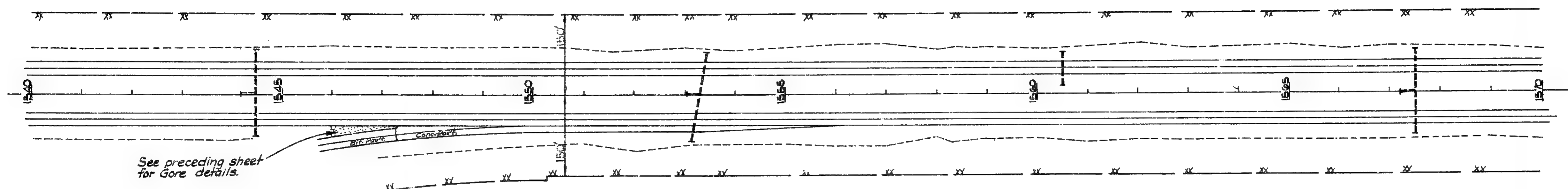
OPERATION	BY	DATE
DESIGNED	D. E. Hurd	Nov 1944
CHECKED	C. E. Hurd	12-18-44
APPROVED	F. C. MAREH	1944

OPERATION	BY	DATE
FINAL DESIGN	D. Eberhard	Nov. 1964
INKED	C. R. King	12-21-64
R.O.W. CHECKED	E. C. Mason	1964-



16091CC16, 16092CC16, 24071CC5	STATE PROJECT	FEDERAL PROJECT	SH
	16092C	17554305	2

OPERATION	EY	DATE
FINAL DESIGN	D. Eberhard	Nov. 1964
INCRD	C. R. Kring	12-19-64
R.O.W. CHECKED SQUAD	F.C. MARSH	1964-

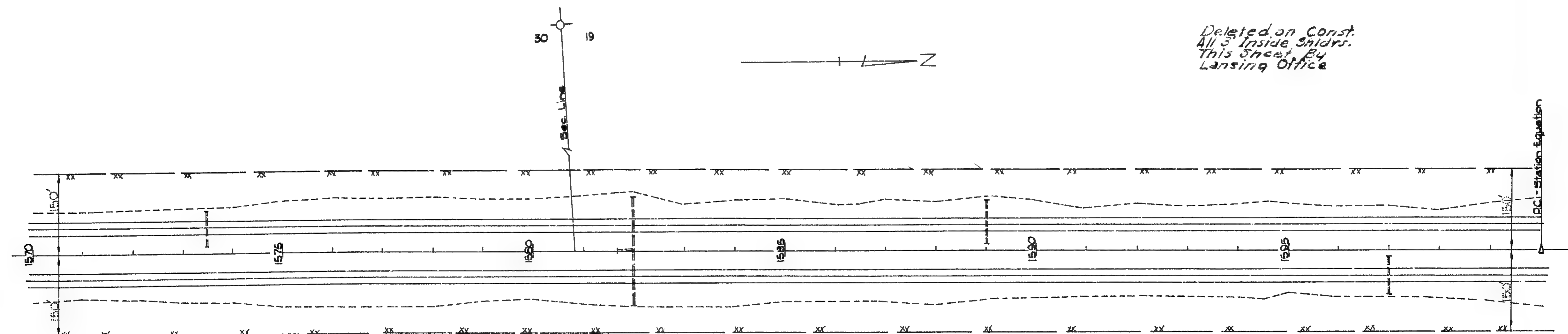


Bit. Agg. Surf. (Conc. Pav't), ~~5' on Inside &~~ 9' on
Outside Shldrs. of the N.B. Rdwy.

Bit. Agg. Surf. (Conc. Pav't.), ~~3' on Inside~~ 7' on Outside Shldrs.
of the N. B. Rdwy.

Bit. Aqg. Surf. (Conc. Pavt), 3' on Inside & 9' on Outside Shldrs. of N.B. Rdwy.

MACKINAW TWP.
T.39N.-R.3W.



Deleted on Const.
All 3' Inside Shldr.
This Sheet, By
Lansing Office

Station Equation (S.B.)
P.C. 272+79.96 Ahead =
1599+98.70 Back

Station Equation (N.B.)
P.C. 272+84.56 Ahead =
1600+02.30 Back

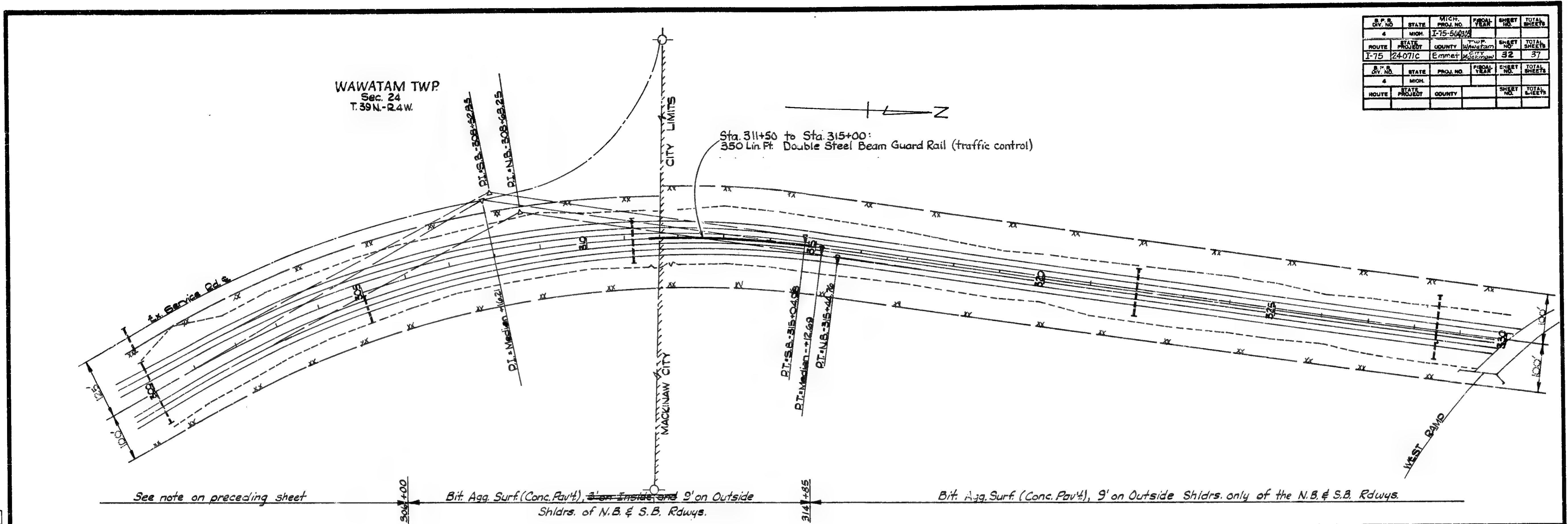
Bit. Agg. Surf. (Conc. Pavt.). ~~3' on Inside & 9' on Outside~~ Shldrs. of the N.B. & S.B. Rdwys.

16091CC16, 16092CC16, 24071CC5	STATE PROJECT 16092C	FEDERAL PROJECT E-15-5(4)305	SHEET NO. 30
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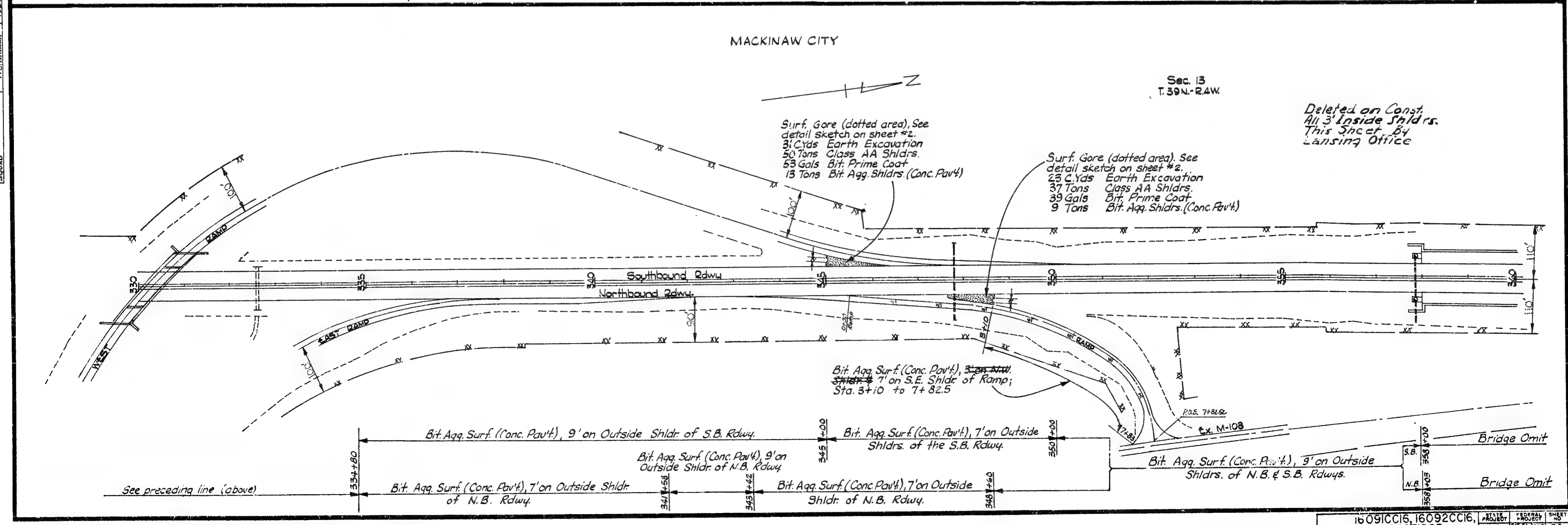
OPERATIONS	BY	DATE
FINAL DESIGN	D. Eberhard	Nov. 1964
INKED	C. B. King	12-22-64
ROLL CHECKED	E. C. Metch	1964

16091CC16, 16092CC16, 24071CC5	STATE PROJECT 16092C 24071C	FEDERAL PROJECT 175-314)305	SHEET NO 31
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S.P. No.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-54000			
ROUTE	PROJECT	COUNTY	TOWNSHIP	SHEET NO.	TOTAL SHEETS
I-75	24071C	Emmet	Wawatam	32	37
S.P. No.	STATE	MICH. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	MICH.	I-75-54000			
ROUTE	PROJECT	COUNTY	TOWNSHIP	SHEET NO.	TOTAL SHEETS
I-75	24071C	Emmet	Wawatam	32	37



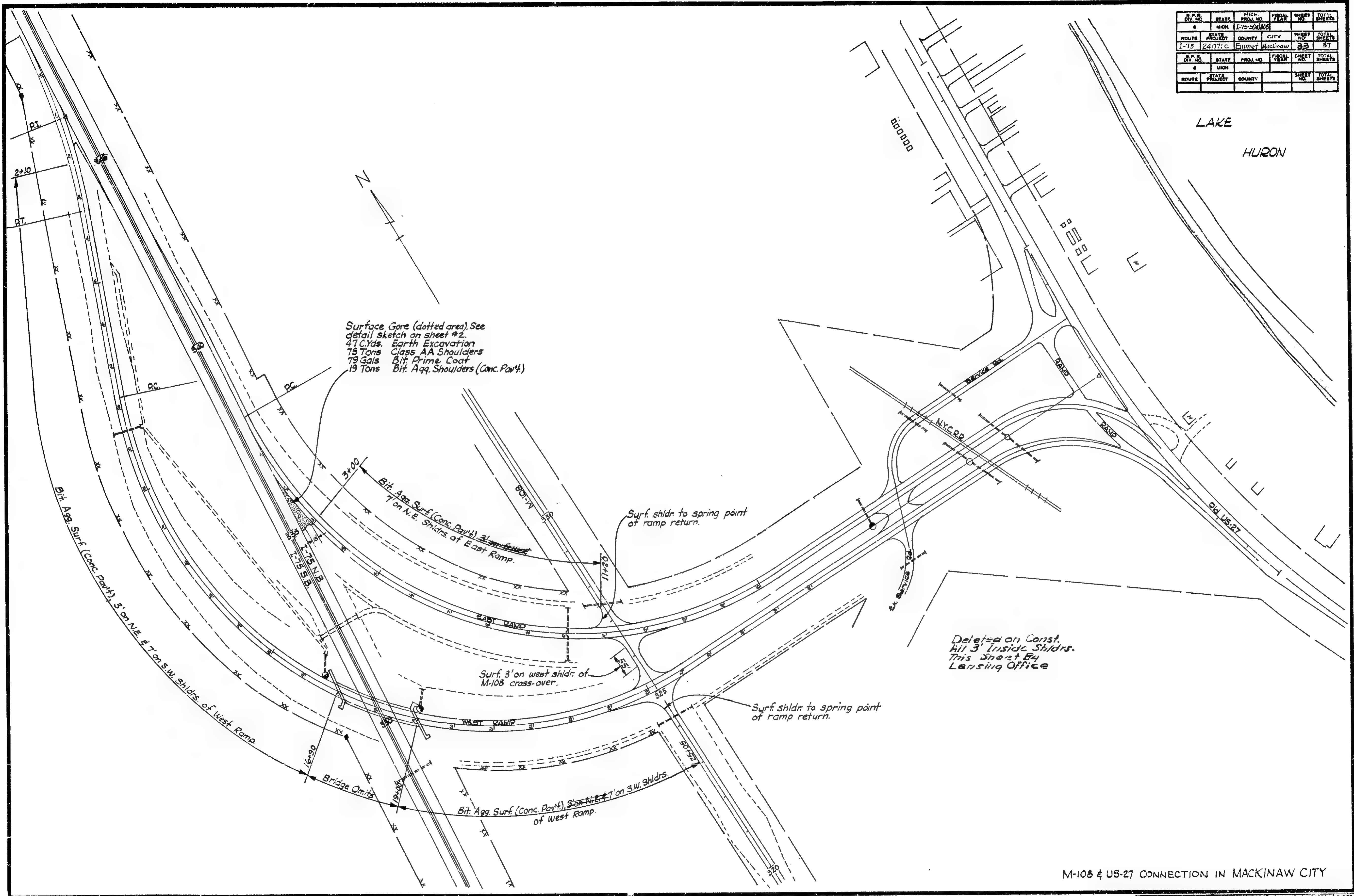
OPERATION	BY	DATE
FINAL DESIGN	C.E. King	12-22-44
CONSTRUCTION	R.O.W. CHURCHARD	
SQUAD	F.C. MARSH	1944



R.P.R. BY NO.	STATE	HIGH. PROJ. NO.	LOCAL YEAR	SHEET NO.	TOTAL SHEETS
ROUTE	STATE	PROJECT	COUNTY	CITY	SHEET NO.
I-75	24071C	Elimet	Mackinaw	33	57
R.P.R. BY NO.	STATE	HIGH. PROJ. NO.	LOCAL YEAR	SHEET NO.	TOTAL SHEETS
ROUTE	STATE	PROJECT	COUNTY	CITY	SHEET NO.
I-75	24071C	Elimet	Mackinaw	33	57

LAKE
HURON

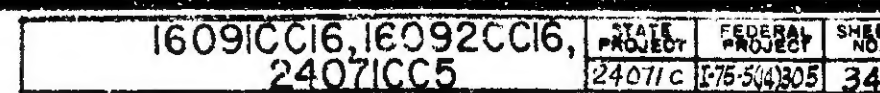
OPERATION	BY	DATE
DESIGN	C.E. KIRBY	12-28-64
INSTR.	"	"
CHECKED	F.C. HANSEN	1964
SQUAD		



M-108 & US-27 CONNECTION IN MACKINAW CITY

16091CC16, 16092CC16, 24071CC5	16091CC16, 16092CC16, 24071CC5	16091CC16, 16092CC16, 24071CC5	16091CC16, 16092CC16, 24071CC5
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OPERATION	BY	DATE
FINAL DESIGN	C.R. King	Nov. 1964
INKED	" "	12-23-64
ROW. CHECKED		
SQUAD	FC. MARSH	1964



QUANTITY SHEET - E

STATE	ROUTE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
MI	1-15	16091CC16	1989	55	37

AS PER PLANS

MICHIGAN PROJECT 1-75-5 (14)305

STA. to STA.	LENGTH	WIDTH	RESHAPING NON-SKD SURFACE	CLASS AA SHOULDERS	BITUMINOUS PRIME COAT	BITUMINOUS AGGREGATE SHOULDERS (CONC. PAVT.)	BITUMINOUS AGGREGATE SHOULDERS (BIT. PAVT.)	BITUMINOUS MATERIAL, APPLIED	COVER MATERIAL SIALMESTONE APPLIED	MAINTAIN- ING TRAFFIC	WATER (1000 GAL. UNITS)	CALCIUM CHLORIDE, APPLIED	STEEL BEAM GUARD RAIL
UNITS CODE NO.	FEET	FEET	STAS	TONS	GALS	TONS	TONS	GALS	TONS	MILES	UNITS	TONS	LIN. FT.
			2917	3120	2973	2950	2951	2976	2964	3287	3150	3070	3200
State Project 16091CC16:													
Northbound Roadway													
356+00 to 359+70	370	3' and 9"		37	55	173	42				0.070	0.66	0.17
359+70 to 362+10	340	3' and 9"		39	122	385	94				0.188	1.46	0.37
362+10 to 365+10	300	3' and 9"		161	239	753	183				0.306	2.37	0.72
365+10 to 368+10 (Sta. Equ. Line Lengths 5.75')													
365+10 to 368+10	300	3' and 9"		149.3	224	699	169				2.828	26.57	6.64
368+10 to 371+10	300	3' and 9"		56.5	70	220	53				0.107	0.84	0.21
371+10 to 374+10	300	3' and 9"		75	111	350	85				0.142	1.33	0.33
374+10 to 377+10	300	3' and 9"		90	111	350	85				0.170	1.33	0.33
377+10 to 380+10	300	3' and 9"		240.6	356.7	1122.6	272.6				4.556	42.80	10.70
380+10 to 383+10	300	3' and 9"		34	42	132	32				0.066	0.50	0.13
383+10 to 386+10	300	3' and 9"		16.0	237	744	181				0.302	2.34	0.71
Southbound Roadway													
362+10 to 365+10	300	3' and 9"		38.6	572	1301	437				0.731	6.86	1.72
365+10 to 368+10	300	3' and 9"		389.1	576.9	1516.8	441.0				7.369	69.25	17.81
368+10 to 371+10	300	3' and 9"		10.7	132	416	101				0.039	1.53	0.40
371+10 to 374+10	300	3' and 9"		15.6	231	728	177				0.296	2.77	0.69
Old US-27 Interchange @ P.O.B.													
N.B. ON RAMP	800	3' and 9"		8.0	99	311		76	311	10	1.19	0.30	
S.B. ON RAMP	800	3' and 9"		1.0	12	39		9			0.14	0.04	
Elginville Hwy. Interchange													
N.B. OFF RAMP	1780	3' and 9"		17.8	220	692		168	692	23	2.64	0.66	
S.B. ON RAMP	1780	3' and 9"		2.1	32	102		25			0.38	0.10	
S.B. ON RAMP	1655	3' and 9"		14.6	180	566		137	566	19	2.16	0.54	
S.B. ON RAMP	800	3' and 9"		1.4	17	53		13			0.20	0.05	
TOTALS				940	14032	44168	10345	381	1569	52	17.332	168	42
State Project - 16092CC16:													
Northbound Roadway													
817+05 to 820+10	255	3' and 9"		9.1	135	426	103				0.173	1.62	0.41
820+10 to 823+10	255	3' and 9"		9.9	123	396	94				0.188	1.46	0.37
823+10 to 826+10	255	3' and 9"		118.7	1700	5538	1345				2.248	21.12	5.28
924+10 to 927+10 (Sta. Equ. Line Lengths 16.64')													
924+10 to 927+10	300	3' and 9"		75.5	1120	3524	856				1.431	13.44	3.36
927+10 to 930+10	300	3' and 9"		4.1	50	158	38				0.077	0.60	0.15
930+10 to 933+10	300	3' and 9"		11.8	175	551	134				0.223	2.10	0.53
933+10 to 936+10	300	3' and 9"		11.00	136	428	104				0.208	1.63	0.41
936+10 to 939+10	300	3' and 9"		398.9	5914	18015	4521				7.555	10.97	17.74
1455+30 to 1458+30 (Sta. Equ. Line Lengths 13.55')													
1455+30 to 1458+30	300	3' and 9"		11.0	163	512	124				0.208	1.96	0.49
1458+30 to 1461+30	300	3' and 9"		732	1174	3695	897				1.500	14.09	3.52
1461+30 to 1464+30	300	3' and 9"		9.8	121	379	92				0.185	1.45	0.36
1464+30 to 1467+30	300	3' and 9"		44.3	656	2065	502				0.838	7.87	1.97
160+10 to 163+10 (Sta. Equ. Line Lengths 12.7174')													
160+10 to 163+10	300	3' and 9"		8.7	130	408	99				0.165	1.54	0.39
163+10 to 166+10	300	3' and 9"		4.0	49	154	37				0.075	0.59	0.18
166+10 to 169+10	300	3' and 9"		5.2	77	242	59				0.097	0.92	0.23
169+10 to 172+10	300	3' and 9"		3.4	51	160	39				0.065	0.61	0.15
Southbound Roadway													
817+10 to 820+10	255	3' and 9"		7.3	108	340	83				0.138	1.30	0.32
820+10 to 823+10	255	3' and 9"		4.1	51	160	39				0.078	0.61	0.15
823+10 to 826+10	255	3' and 9"		126.7	1878	5911	1436				2.399	22.54	5.63
924+10 to 927+10 (Sta. Equ. Line Lengths 16.64')													
924+10 to 927+10	300	3' and 9"		67.1	926	2833	701				1.272	11.95	2.99
927+10 to 930+10	300	3' and 9"		9.7	120	377	92				0.184	1.44	0.36
930+10 to 933+10	300	3' and 9"		11.9	176	553	134				0.224	2.11	0.53
933+10 to 936+10	300	3' and 9"		4.8	59	187	45				0.091	0.71	0.18
936+10 to 939+10	300	3' and 9"		6.382	946	2978	729				1.209	11.35	2.84
939+10 to 942+10	300	3' and 9"		9.1	112	353	86				0.172	1.34	0.34
942+10 to 945+10	300	3' and 9"		4.1	60	190	46				0.083	0.72	0.18
945+10 to 948+10	300	3' and 9"		3.8	43	139	34				0.066	0.52	0.13
948+10 to 951+10	300	3' and 9"		326.7	4844	15247	3703				6.188	58.13	14.53
1455+30 to 1458+30 (Sta. Equ. Line Lengths 13.55')													
1455+30 to 1458+30	300	3' and 9"		11.0	163	512	124				0.208	1.96	0.49

AS CONSTRUCTED

STA. to STA.	LENGTH	WIDTH	RESHAPING NON-SKID SURFACE	CLASS AA SHOULDERS	BITUMINOUS PRIME COAT	BITUMINOUS AGGREGATE SHOULDERS (CONC. PAVT.)	BITUMINOUS AGGREGATE SHOULDERS (BIT. CONC.)	BITUMINOUS MATERIAL APPLIED	COVER MATERIAL (SIALMESTONE) APPLIED	MAINTAIN- ING TRAFFIC	WATER (1000 GAL. UNITS)	CALCIUM CHLORIDE, APPLIED	STEEL BEAM GUARD RAIL	SHOULDER JOINT
UNITS CODE NO.	FEET	FEET	STAS	TONS	GALS	TONS	TONS	GALS	TONS	MILES	UNITS	TONS	LIN. FT.	LIN. FT.
			2917	3120	2973	2950	2951	2976	2964	3287	3150	3070	3200	05300
STATE PROJECT I 16091 CC16:														
NORTHBOUND ROADWAY														
356+00 to 359+70	370.0	7'		3.3	0	53	32			1.062	0	0		330
359+70 to 362+10	340.0	7'		9.5	0	103	66			1.182	0	0		954
362+10 to 365+10	330.0	9'		16.0	0	229	139			1.304	3.334	0		1603
365+10 to 368+10 = 305+16.29 ahead (Sta. Equiv. Line Lengths 5.75')														
365+10 to 368+10	330.0	7'		148.7	146.1	8115	1884			2.816	2.371	0	0	14567
368+10 to 371+10	330.0	7'		5.7	0	62	37			1.036	0	0	0	722
371+10 to 374+10	330.0	8'		11.3	0	78	64			1.167	0	0	0	687
374+10 to 377+10	330.0	7'		9.9	0	99	60			1.137	0	0	0	1038
377+10 to 380+10	330.0	9'		238.6	0	3405	2069			4.519	3.660	0	0	23860
380+10 to 383+10	330.0	7'		3.9	0	37	23			1.086	1.40	0	0	490
383+10 to 386+10	330.0	9'		16.3	0	226	137			1.290	1.54	0	0	1529
SOUTHBOUND Roadway														
362+10 to 365+10	330.0	7'		38.7	242.6	547	332			1.733	3.69	0	0	3871
365+10 to 368+10 = 401+30.14 ahead (Sta. Equiv. Line Shortcuts 30.14)														
365+10 to 368+10	330.0	7'		389.2	310.5	5509	3246			7.972	14.06	0	0	38923
368+10 to 371+10	330.0	7'		16.6	0	118	72			1.217	2.24	0	0	1062
371+10 to 374+10	330.0	9'		16.4	0	221	134			1.278	1.37	0	0	1639
OLD U.S.-27 Interchange @ P.O.B.														
N.B. on Ramp	800	7'		2.8	85.7	68	54	3.3			1.71	0	0	731
368+10 to 367+10 N.B. Ramp Goes	800	7'		0.6		16	9					0	0	
REST AREA APPROACHES														
ESTABLISH RAMP GORE		7'		1.5		14	10				1.71	0	0	
ESTABLISH RAMP GORE		7'		0.4		14	10				1.71	0	0	
RIDGEVILLE HWY INTERCHANGE														
N.B. OFF RAMP	800	7'		1.4	0	196		106.8	542	16.4		1.71	0	
368+10 to 367+10 N.B. Ramp Goes	800	7'		1.0		41	254					0	0	
S.B. on Ramp	800	7'		14.2	0	160		443	13.6		1.71	0	0	
368+10 to 367+10 S.B. Ramp Goes	800	7'		1.0		41	254					0	0	
TOTALS	2851.5			268.9	173.55	7316.9	215.6	245	300	17.919	47.04			32357
				R-1015	R-1015	R-1015	R-1015	R-182	R-182	R-182	R-182	R-1015		R-182
STATE PROJECT I 16092 CC16														
NORTHBOUND ROADWAY														
372+00 to 375+10	300.0	9'		9.3	0	160	80			1.171	1.99	0	0	935
375+10 to 378+10	300.0	7'		10.0	0	135	67			1.189	1.99	0	0	935
378+10 to 381+10	330.0	7'		118.7	0	2075	1036			2.218	18.53	0	0	11871
381+10 to 384+10 = 384+60.40 ahead (Sta. Equiv. Line Lengths 16.64)														
381+10 to 384+10	330.0	9'		31.4	0	1322	660			1.428	0	0	0	7540
384+10 to 387+10	330.0	7'		3.8	0	53	28			1.078	0	0	0	378
387+10 to 390+10	330.0	7'		15.7	0	206	103			1.293	0	0	0	1376
390+10 to 393+10	330.0	7'		9.1	0	150	75			1.138	1.23	0	0	907
393+10 to 396+10	330.0	9'		372.1	463.0	6775	3404			7.538	57.43	0	0	37208
396+10 to 400+10	440.0	9'		10.8	820	192	96			2.06	1.37	0	0	1624
400+10 to 403+10 = 406+18.11 ahead (Sta. Equiv. Line Shortcuts 7.88)														
400+10 to 403+10	330.0	7'		80.6	288.5	1385	692			1.524	2.55	0	0	8064
403+10 to 406+10	330.0	7'		8.5	0	133	66			1.160	1.12	0	0	845
406+10 to 409+10	330.0	9'		44.3	314.9	774	387			1.219	3.01	0	0	2428
409+10 to 412+10 = 272+18.56 ahead (Sta. Equiv. Line Lengths 138.71, 71.74)														
409+10 to 412+10	330.0	7'		21	132.0	153	76			1.173	0	0	0	914
412+10 to 415+10	330.0	7'		2.8	61.5	54	27			1.065	0	0	0	284
415+10 to 418+10	330.0	9'		6.9	61.5	91	45			1.102	0	0	0	687
418+10 to 421+10 = 270+10.47 ahead (Sta. Equiv. Line Lengths 33.75)														
418+10 to 421+10	330.0	9'		3.5	12.9	60	30			1.065	0	0	0	346
SOUTHBOUND ROADWAY:														
384+10 to 387+10	330.0	7'		7.5	0	127	64			1.140	1.76	0	0	745
387+10 to 390+10	330.0	7'		4.0	0	54	27			1.076	1.30	0	0	403
390+10 to 393+10	330.0	9'		16.6	31.7	2215	1106			2.338	2.70	0	0	1662
393+10 to 396+10 = 394+60.40 ahead (Sta. Equiv. Line Lengths 16.64)														
393+10 to 396+10	330.0	7'		64.2	0	1174	587			1.234	2.76	0	0	6621
396+10 to 399+10	330.0	7'		9.1	0	132	66			1.202	1.42	0	0	763
399+10 to 402+10	330.0	9'		17.3	0	207	104			1.225	1.65	0	0	1671
402+10 to 405+10	330.0	7'		4.3	0	65	33			1.090	1.46	0	0	566
405+10 to 408+10	330.0	7'		63.9	122.3	116	557			1.271	3.88	0	0	6391
408+10 to 411+10	330.0	7'		8.9	0	123	62			1.161	1.77	0	0	825
411+10 to 414+10	330.0	9'		3.8	0	62	41			1.071	1.25	0	0	376
414+10 to 417+10	330.0	7'		4.9	0	47	24			1.092	1.20	0	0	466
417+10 to 420+10	330.0	9'		326.8	0	5712	2854			6.190	2.28	0	0	3268
420+10 to 423+10 = 425+16.75 ahead (Sta. Equiv. Line Lengths 13.55)														
420+10 to 423+10	330.0	9'		11.0	0	120	36			1.208	1.31	0	0	6078
CONTINUED ON SHEET # 36														

QUANTITY SHEET - E

ROUTE	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
1-75	MI	16092	36	37

AS PER PLANS

MICHIGAN PROJECT 1-75-5 (14)305

STA. to STA.	LENGTH	WIDTH	RESHAPING NON-SKID SURFACE	CLASS AA SHOULDERS	BITUMINOUS PRIME COAT	BITUMINOUS AGGREGATE SHOULDERS (CONC. PAVT.)	BITUMINOUS AGGREGATE SHOULDERS (BIT. PAVT.)	BITUMINOUS MATERIAL APPLIED	COVER MATERIAL (1000 GAL. UNITS)	MAINTAINING TRAFFIC	WATER (1000 GAL. UNITS)	CALCIUM CHLORIDE APPLIED	STEEL BEAM GUARD RAIL
UNITS	FEET	FEET	STA.	TONS	GALS	TONS	TONS	GALS	TONS	MILES	UNITS	TONS	LIN. FT.
CODE NO.			29.7	3120	2972	2950	2951	2976	2944	3283	3150	3070	3200
State Project 16092 CC16, Cont'd:													
Southbound Roadway (Cont'd):													
1164+82.11 1516+80 4997.89 3' and 9'													
1516+80	1526+07	927	3' and 9'	50.0	741	2332	566			0.947	8.89	2.22	
1526+07	1539+28.10	739.10	3' and 9'	3.3	115	361	88			0.176	1.38	0.35	
1539+28.10	1559+28.10	739.10	3' and 9'	73.9	1096	3450	838			1.400	13.15	3.29	
1559+28.10 272+79.96 Ahead (Sta. Equat. - Line lengthens 132.71a.74)													
272+79.96	273+55	75.04	3' and 9'	0.8	11	35	9			0.014	0.13	0.03	
273+55	282+75	920	3' and 9'	9.2	114	353	87			0.174	1.37	0.34	
282+75	293+13	1038	3' and 9'	10.4	154	484	118			0.197	1.85	0.46	
Riggsville Hwy. Interchange:													
N.B. ON-Ramp 810 3' and 7'													
825+40	826+40	N.B. ON-Ramp Gore		8.1	100	315	10				1.20	0.30	
825+40	826+40	N.B. ON-Ramp Gore		1.0	12	39	9				0.14	0.04	
825+40	826+40	S.B. OFF-Ramp Gore		9.3	121	381	13				1.45	0.36	
825+40	826+40	S.B. OFF-Ramp Gore		1.7	22	66	16				0.24	0.07	
Levering Road Interchange:													
N.B. OFF-Ramp 795 3' and 7'													
1032+25	1034+25	N.B. OFF-Ramp Gore		8.0	98	309	10				1.18	0.29	
1032+25	1034+25	N.B. OFF-Ramp Gore		2.0	24	78	19				0.29	0.07	
1032+25	1034+25	N.B. ON-Ramp		7.4	91	288	9				1.09	0.27	
1032+25	1034+25	N.B. ON-Ramp		3.5	43	136	33				0.52	0.13	
1032+25	1034+25	N.B. ON-Ramp		7.4	91	286	9				1.09	0.27	
1032+25	1034+25	S.B. ON-Ramp		3.4	42	130	32				0.50	0.13	
1032+25	1034+25	S.B. ON-Ramp		7.3	90	284	9				1.08	0.27	
1032+25	1034+25	S.B. OFF-Ramp Gore		2.0	27	85	21				0.32	0.08	
Rest Area Approaches:													
1119+40	1120+80	S.B. ON-Ramp Gore		1.4	17	55	13				0.20	0.05	
1120+80	1126+90	S.B. OFF-Ramp Gore		1.2	15	46	11				0.18	0.05	
US-31 Connections:													
S.B. Ramp to US-31 1519 3' and 7'													
1516+80	1517+80	S.B. OFF-Ramp Gore		15.2	188	591	19				2.26	0.56	
1516+80	1517+80	S.B. OFF-Ramp Gore		6.5	49	153	37				0.59	0.15	
1516+80	1517+80	S.B. OFF-Ramp Gore		1.0	15	49	12				0.18	0.05	
1516+80	1517+80	N.B. Ramp from US-31		40.2	496	1561	51				5.95	1.49	
1516+80	1517+80	N.B. ON-Ramp Gore		1.4	21	66	16				0.25	0.06	
1516+80	1517+80	N.B. ON-Ramp Gore		6.4	79	247	8				0.95	0.24	
1516+80	1517+80	S.B. ON-Ramp Gore		0.8	10	31	8				0.12	0.03	
1516+80	1517+80	N.B. Ramp to US-31		12.8	158	496	16				1.90	0.47	
1516+80	1517+80	N.B. OFF-Ramp Gore		0.8	12	39	9				0.14	0.04	
1516+80	1517+80	N.B. OFF-Ramp Gore											428.5
TOTALS													
				1757	23,442	80,077	18,255	1192	4911	159	30.46	305	76 429

AS CONSTRUCTED

STA. to STA.	LENGTH	WIDTH	RESHAPING NON-SKID SURFACE	CLASS AA SHOULDERS	BITUMINOUS PRIME COAT	BITUMINOUS AGGREGATE SHOULDERS (CONC. PAVT.)	BITUMINOUS AGGREGATE SHOULDERS (BIT. CONC.)	BITUMINOUS MATERIAL APPLIED	COVER MATERIAL (1000 GAL. UNITS)	MAINTAINING TRAFFIC	WATER (1000 GAL. UNITS)	CALCIUM CHLORIDE APPLIED	STEEL BEAM GUARD RAIL	Notes
UNITS	FEET	FEET	STA.	TONS	GALS	TONS	TONS	GALS	TONS	MILES	UNITS	TONS	LIN. FT.	
CODE NO.			2917	3120	2972	2950	2951	2976	2944	3283	3150	3070	3200	
STATE PROJECT 16092 CC16: (CONT.)														
SOUTHBOUND ROADWAY (CONT.):														
1164+82.11 1516+80 4997.89 3' and 9'														
1516+80	1526+07	927	3' and 9'	56.7	0	874	437				268	72	0	5,006
1526+07	1539+28.10	739.10	3' and 9'	8.5	14.9	126	63				1.277	13.14	0	86
1539+28.10	1559+28.10	739.10	3' and 9'	73.9	385.9	1292	646				1.399	13.14	0	2,385
1559+28.10 272+79.96 Ahead (Sta. Equat. - Line lengthens 132.71a.74)														
272+79.96	273+55	75.04	3' and 9'	1.2	0	13	4				0.19	1.19	0	59
273+55	282+75	920	3' and 9'	8.0	11.6	125	64				1.68	1.63	0	802
282+75	293+13	1038	3' and 9'	11.0	0	181	92				1.81	1.87	0	1,105
RIGGSVILLE HWY INTERCHANGE:														
N.B. ON-Ramp 825.5 7'														
825+40	826+40	N.B. OFF-Ramp Gore		8.7	0	110	-				62.6	267	6.1	
825+40	826+40	N.B. OFF-Ramp Gore		0.6	0	19	-				1.21	0	0	
825+40	826+40	S.B. OFF-Ramp		9.2	10.1	133	-				68.3	297	9.1	
825+40	826+40	S.B. OFF-Ramp Gore		0.4	0	33	16				1.1	0	0	
LEVERING ROAD INTERCHANGE:														
N.B. OFF-Ramp 1032.5 7'														
1032+25	1034+25	N.B. OFF-Ramp Gore		10.8	-	25.0	215				6.4	-	-	
1032+25	1034+25	N.B. OFF-Ramp Gore		0.2	0	39	20				1.1	-	-	
1032+25	1034+25	N.B. ON-Ramp		9.1	0	101	-				61.7	289	9.8	
1032+25	1034+25	N.B. ON-Ramp		1.2	0	68	34				1.1	-	-	
1032+25	1034+25	S.B. ON-Ramp		6.4	0	102	-				37.1	290	6.9	
1032+25	1034+25	S.B. ON-Ramp		1.0	0	63	33				1.1	-	-	
1032+25	1034+25	S.B. OFF-Ramp		7.7	0	93	-				53.5	246	7.8	
1032+25	1034+25	S.B. OFF-Ramp Gore		1.2	0	42	22				1.6	0	0	
REST AREA APPROACHES:														
1119+40	1120+80	S.B. ON-Ramp Gore		0.3	0	27	13				25	0	0	
1120+80	1126+90	S.B. OFF-Ramp Gore		0.3	0	23	11				24	0	0	
US-31 CONNECTIONS:														
S.B. Ramp to US-31 1519 7'														
1516+80	1517+80	S.B. OFF-Ramp Gore		17.6	44.0	206	-				111.6	538	17.4	
1516+80	1517+80	S.B. OFF-Ramp Gore		5.3	0	76	-				52.8	103	3.8	
1516+80	1517+80	S.B. ON-Ramp Gore		1.0	0	24	13				1.1	-	-	
1516+80	1517+80	N.B. Ramp from US-31		41.3	0	546	-				282.8	1307	42.3	
1516+80	1517+80	N.B. ON-Ramp Gore		1.4	0	38	16				1.1	-	-	
1516+80	1517+80	N.B. ON-Ramp Gore		7.1	0	86	50.5				1.1	-	-	
1516+80	1517+80	S.B. ON-Ramp Gore		0.5	0	15	8.3				1.1	-	-	
1516+80	1517+80	N.B. Ramp to US-31		13.8	216.9	173	36.7				1.1	-	-	
1516+80	1517+80	N.B. OFF-Ramp Gore		1.0	0	19	10.0				1.1	-	-	
1516+80	1517+80	N.B. OFF-Ramp Gore												428.5
TOTALS														
				6,554	2,308.7	79,922	10,723	91.6	3,612	111.6	30,464	130.61	0	4,529

All quantity totals on this sheet are shown to the nearest whole unit except Maintaining Traffic.

16092 CC16, I16092CC16, I2407ICC5

QUANTITY SHEET - E

STATE	ROUTE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
MI	16092CC16	12407ICC5	37	37

AS PER PLANS

AS CONSTRUCTED

MICHIGAN PROJECT 1-75-5 (14)305

STA. to STA.	LENGTH	WIDTHS	EARTH EXCAVATION (WASTE)	CLASS 1A SHOULDERS	BITUMINOUS PRIME COAT	BITUMINOUS AGGREGATE SHOULDERS (CONC. PAVT)	BITUMINOUS AGGREGATE SHOULDERS (BIT. PAVT)	BITUMINOUS MATERIAL APPLIED	COVER MATERIAL (JALMSTONE) APPLIED	MAINTAIN- ING TRAFFIC	WATER (1000 GAL. UNITS)	CALCIUM CHLORIDE APPLIED	DOUBLE STEEL BEAM GUARD RAIL
UNITS	FEET	FEET	CYBS	TONS	GALS	TONS	TONS	GALS	TONS	MILES	UNITS	TONS	LN. FT.
CODE NC			0101	3120	2973	2950	2951	2976	2964	3283	3150	3070	3204
State Project - I 2407 ICC5													
Northbound Roadway													
253+13 314+85	612	2 and 9'	805	1287	1014	244				0.41	15.44	3.86	
314+85 314+85	0	9'	460	739	638	170				0.318	8.87	2.22	
314+85 314+85	0	9'	126	201	184	45				0.128	2.41	0.60	
314+85 314+85	0	9'	43	68	64	16				0.035	0.82	0.20	
314+85 314+85	0	9'	96	158	141	34				0.038	1.84	0.46	
314+85 314+85	0	9'	218	349	330	80				0.119	4.19	1.05	
314+85 314+85 (Bridge Omit)	0	9'											
314+85 314+85	0	9'	67	107	102	25				0.055	1.28	0.32	
314+85 314+85 (Bridge Omit)	0	9'											
314+85 314+85	0	9'	72	115	109	26				0.059	1.38	0.35	
314+85 314+85	0	9'	69	110	101	24	101	3		0.070	1.82	0.43	
314+85 314+85 (Janet St. Appr. Omit)	0	9'											
314+85 314+85	0	9'	125	200	183	45	183	6		0.128	2.40	0.60	
314+85 314+85	0	9'	42	67	63	15				0.034	0.82	0.20	
Southbound Roadway													
253+13 314+85	612	2 and 9'	779	1244	981	238				0.394	14.95	3.74	
314+85 314+85	0	9'	638	1117	1053	236				0.371	13.40	3.35	
314+85 314+85	0	9'	93	148	136	33				0.095	1.78	0.44	
314+85 314+85	0	9'	185	236	220	68				0.182	3.55	0.89	
314+85 314+85 (Bridge Omit)	0	9'											
314+85 314+85	0	9'	70	112	105	26				0.057	1.34	0.34	
314+85 314+85 (Bridge Omit)	0	9'											
314+85 314+85	0	9'	120	192	177	43	177	6		0.123	2.30	0.58	
314+85 314+85	0	9'	34	54	51	12				0.027	0.65	0.16	
314+85 314+85	0	9'	32	52	49	12				0.084	1.58	0.40	
314+85 314+85	0	9'	97	156	147	36				0.080	1.87	0.47	
314+85 314+85 (Traffic Control)	0	9'											350
M-108 & US-27 Connection (MacKinnaw City)													
West Ramp	2.085	3 and 7'	674	1081	811	197					12.97	3.24	
314+85 314+85	0	9'	31	50	43	13				0.60	0.15		
East Ramp	2.085	3 and 7'	266	425	319	77					5.10	1.28	
314+85 314+85	0	9'	47	75	79	19				0.90	0.23		
N.B. OFF Ramp	473	3 and 7'	153	235	184	45				2.34	0.74		
314+85 314+85	0	9'	23	37	32	9				0.44	0.11		
M-108, X-Over Shldr	55	7'	10	16	15	4				0.19	0.05		
Janet St Intersection													
N.B. Appr. (N.B. Shldr) 280	7'		52	83	76	19	76	3		1.00	0.25		
S.B. ON Ramp	85	3 and 7'	28	44	33	8	33	1		0.53	0.13		
314+85 314+85	0	9'	16	25	27	6				0.30	0.08		
S.B. OFF Ramp	140	3 and 7'	45	73	55	13	55	2		0.88	0.22		
314+85 314+85	0	9'	14	24	24	6				0.39	0.07		
TOTALS			5444	9027	7757	1702	181	746	3.3	3.16	108	27	350

STA. to STA.	LENGTH	WIDTH	EARTH EXCAVATION (WASTE)	CLASS 1A SHOULDERS	BITUMINOUS PRIME COAT	BITUMINOUS AGGREGATE SHOULDERS (CONC. PAVT)	BITUMINOUS AGGREGATE SHOULDERS (BIT. PAVT)	BITUMINOUS MATERIAL APPLIED	COVER MATERIAL (JALMSTONE) APPLIED	MAINTAIN- ING TRAFFIC	WATER (1000 GAL. UNITS)	CALCIUM CHLORIDE APPLIED	DOUBLE STEEL BEAM GUARD RAIL
UNITS	FEET	FEET	CYBS	TONS	GALS	TONS	TONS	GALS	TONS	MILES	UNITS	TONS	LN. FT.
CODE NC			0101	3120	2973	2950	2951	2976	2964	3283	3150	3070	3204
STATE PROJECT - I 2407 ICC5													
Northbound Roadway													
253+13 314+85	612	2 and 9'	176	280.0	612	180				99	2.34	0.39	16.70
314+85 314+85	0	9'	437	688.5	580	171					1.25	6.41	0
314+85 314+85	0	9'	121	187.3	153	45					0.87	1.74	0
314+85 314+85	0	9'	29	43.4	53	16					0.86	0.59	0
314+85 314+85	0	9'	67	112.5	117	34					0.78	1.33	0
314+85 314+85	0	9'	204	325.2	274	81					1.82	3.03	0
314+85 314+85 (BRIDGE OMIT)	0	9'											
314+85 314+85	0	9'	73	98.6	85	25					0.84	0.93	0
314+85 314+85 (BRIDGE OMIT)	0	9'											
314+85 314+85	0	9'	68	107.2	91	27					0.63	1.00	0
314+85 314+85	0	9'	72	102.4	84	25	141	3.77		0.6	0.95	0	335
314+85 314+85 (JANET STREET APPR. OMIT)	0	9'											
314+85 314+85	0	9'	165	186.4	152	46	254	7.98		1.36	1.74	0	136
314+85 314+85	0	9'	30	48.5	52	15				0.26	0.58	0	
SOUTH BOUND ROADWAY													
253+13 314+85	612	2 and 9'	245	403.3	432	126				121	3.60	4.18	11.05
314+85 314+85	0	9'	720	1040.8	877	258					0.82	3.69	0
314+85 314+85	0	9'	103	177.9	113	33					0.81	1.63	0
314+85 314+85	0	9'	143	235.8	233	68					1.45	2.57	0
314+85 314+85 (BRIDGE OMIT)	0	9'											
314+85 314+85	0	9'	60	104.4	87	26					0.88	0.97	0
314+85 314+85 (BRIDGE OMIT)	0	9'											
314+85 314+85	0	9'	136	176.8	147	45	246	7.99		1.19	1.66	0	51
314+85 314+85	0	9'	47	80.3	42	12				0.44	0.47	0	230
314+85 314+85	0	9'	108	123.0	101	30	168	5.32		0.79	1.14	0	385
314+85 314+85	0	9'	36	45.4	123	36				0.73	1.35	0	
314+85 314+85 (TRAFFIC CONTROL)	0	9'											353
M-108 & US-27 CONNECTION (MACKINAW CITY)													
West Ramp	2.204	7'	430	671.8	412	139					3.38	0	2304
314+85 314+85	0	9'	8	46.6	44	13					0.43	0	29
East Ramp	1.053	7'	196	395.9	185	63					2.69	0	1053
314+85 314+85	0	9'	12	46.6	66	19					0.65	0	97
N.B. OFF Ramp	5.15	7'	32	151.9	107	32					2.13	0	543
314+85 314+85	0	9'	6	31.5	32	9					0.32	0	50
M-108, X-Over Shldr	7'		16	14.9	12	4					0.14	0	
JANET STREET Intersection													
N.B. Appr. (N.B. Shldr) 280	7'		48	72.3	63	19	63	1		1.06	0.22	0	116
S.B. ON Ramp	85	3 and 7'	15	24.0	13	6	13	1		1.33	0.38	0	
314+85 314+85	0	9'	3	23.3	22	6					0.28	0	
S.B. OFF Ramp	174.0	3 and 7'	45	45.6	32	10	32	2		2.66	0.64	0	
314+85 314+85	0	9'	22.4	20	6						0.21	0	
314+85 314+85	0	9'											
TOTALS			206	395.9	639.3	562	1496	181	1258	39.80	3.157	78.10	0

All quantity totals on this sheet are shown to the nearest whole unit, except Main-aining Traffic.

Proj # 65158001													
Sec 16091 CC16	Picking up Shoulder Material	\$ 4500.00	Rec # 13F										
Sec 16092 CC16	"	4000.55	Rec # 14F										
	Total	\$ 8500.55											
Entire Proj. Liquidation of damages		-4300.00	Rec # 20F										

Non-Federal Part